Escambia Operating Company, LLC
Flomaton/Fanny Church Oil & Gas Production and Treating Facility
Flomaton (Escambia County), AL
Facility No: 502-0005

STATEMENT OF BASIS

The proposed Title V Major Source Operating Permit (MSOP) renewal is issued under the provisions of ADEM Admin. Code R. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Escambia Operating Company, LLC was issued its existing MSOP on June 25, 2006 with an expiration date of April 25, 2010 for the Flomaton/Fanny Church Oil and Gas Production and Treating Facility (FFC Plant) located in Flomaton, AL. Per ADEM Rule 335-3-16-.12(2), an application for permit renewal shall be submitted at least six (6) months, but not more that eighteen (18) months, before the date of expiration of the permit. The initial renewal application was received on October 24, 2009. On November 18, 2009 and December 14, 2009, the facility was notified of deficiencies in the permit application. On February 25, 2010, a complete permit application for the permit renewal was received at the Department. The proposed MSOP will expire on April 25, 2015.

The renewal will address the facility's applicability to the area source requirements of 40 CFR 63 Subpart HH, "*National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities*". Since the refrigeration plant which was permitted on March 19, 2009, will not be added to the MSOP during this renewal the facility will be required to add the unit to the MSOP within one year from the date the unit commences operation.

PROCESS DESCRIPTION

The facility consists of the Fanny Church Oil and Gas Production Field (FC), the Flomaton Oil and Gas Production Field (Flomaton), and the Flomaton/Fanny Church Gas Treating Plant (FFC Plant); however, all are permitted under MSOP 502-0005. High pressure and low pressure wells are produced in the Flomaton and the FC fields and sent to the FFC Plant for treating and processing.

Fanny Church (FC) Field Process Description

The High Pressure System:

Sour natural gas/liquids from the FC high pressure production wells enter the high pressure inlet separator where the high pressure sour natural gas is directed to the Flomaton low pressure inlet separator; produced/salt water is sent to storage for disposal; and, low pressure oil/liquids are directed to the FC oil stabilization plant. Stabilized liquids are subsequently sent to the sales pipeline. Low pressure sour vapors generated during the FC liquids stabilization are directed to the FFC Plant low pressure amine treating plant.

The Low Pressure System:

Sour natural gas/liquids from the FC low pressure production wells enter the low pressure inlet separator where sour natural gas is directed to the FFC Plant low pressure amine treating plant; produced/salt water is sent to storage for disposal; and, low pressure oil/liquids are directed the FC oil stabilization plant. Stabilize liquids are subsequently sent to the sales pipeline. Again, low pressure sour vapors generated during the FC liquids stabilization are directed to the FFC Plant low pressure amine treating plant.

The FC Field consisting of the following process units:

- High pressure inlet separator receiving sour natural gas/liquids from the Fanny Church high pressure production wells
- Low Pressure inlet separator receiving sour natural gas/liquids from the Fanny Church low pressure production wells
- Oil/condensate stabilization plant

Flomaton Field Process Description

The High Pressure System:

Sour natural gas/liquids from the Flomaton high pressure production wells and from the Bishop Petroleum high pressure line enter the Flomaton high pressure separator where sour natural gas is directed to the FFC Plant high pressure amine treating plant; produced/salt water is sent to storage for disposal; and, oil/liquids are directed to the Flomaton condensate stabilization plant. Stabilized liquids are subsequently sent to the sales pipeline. Low pressure sour vapors generated during the Flomaton liquids stabilization are directed to the FFC Plant low pressure amine treating plant.

The Low Pressure System:

Sour natural gas/liquids from the Flomaton low pressure production wells and from the FC high pressure inlet separator enter the Flomaton low pressure separator where solar turbine-driven compressors compress and direct the low pressure sour natural gas to the Flomaton Field high pressure inlet separator; produced/salt water is sent to storage for disposal; and, oil/liquids are directed to the Flomaton condensate stabilization plant. Any leaks from the solar compressor are captured and routed to the compressor flare. Stabilized liquids are subsequently sent to the sales pipeline. Low pressure sour vapors generated during the Flomaton liquids stabilization are directed to the FFC Plant low pressure amine treating plant.

The Flomaton facility consisting of the following process units:

- High pressure inlet separator receiving sour natural gas/liquids from the Flomaton high pressure production wells and the Bishop Petroleum high pressure sour gas system

- Low pressure inlet separator receiving sour natural gas/liquids from the Flomaton low pressure production wells
- Oil/condensate stabilization plant
- Two (2) Solar turbine-driven compressors
- Compressor Seal Flare (F-02)

The Flomaton/Fanny Church Gas Treating Plant (FFC Plant) Process Description

The High Pressure System:

HP sour natural gas from Flomaton enters the FFC Plant high pressure amine treating plant. Acid gas produced from the high pressure amine treating unit is sent to the sulfur recovery plant where elemental sulfur is produced and trucked off-site. The tail gas from the sulfur recovery plant is burned in the thermal oxidizer (or the flare during emergencies).

The sweetened natural gas from the high pressure amine treating plant is compressed and directed to the tri-ethylene glycol (TEG) dehydration plant to remove any liquids. Vapors from the glycol dehydration still column vent are routed to the BTEX Buster to remove benzene, ethyl-benzene, toluene, xylenes, and n-hexane. Any uncondensed vapors are routed to the thermal oxidizer. The sweet gas is then either used as fuel or sent to the sales pipeline. Currently, the facility is unable to sell the gas, because the gas does not meet the end users specification. However, once the refrigeration plant has been installed, the gas will be sold. The refrigeration plant will produce natural gas liquids which will be directed back to the Flomaton liquids stabilization plant and eventually be transported off-site via the sales pipeline. The conditioned sweet gas will exit the refrigeration plant and then be sent to the sales pipeline.

The Low Pressure System:

The low pressure sour gas from the FC and Flomaton facilities enter the low pressure amine treating unit at the FFC Plant to be sweetened. The sweet gas leaving the amine treating unit is used a fuel in the plant's combustion equipment. Acid gas produced from the low pressure amine treating unit is sent to the sulfur recovery plant where elemental sulfur is produced and trucked off-site. The tail gas from the sulfur recovery plant is burned in the thermal oxidizer (or the flare during emergencies).

The Flomaton/Fanny Church Gas Plant consists of the following process units:

- High pressure, sour natural gas, amine treating plant
- Low pressure, sour natural gas, amine treating plant used to provide sweet natural gas fuel for site combustion equipment
- Sulfur recovery unit (SRU) for processing both high pressure and low pressure acid gas streams from each amine treating plant
- Thermal oxidizer for combustion of the SRU tail gas stream
- Compression for sweetened natural gas

- Tri-ethylene glycol (TEG) dehydration unit
- BTEX Buster
- Refrigeration Plant for natural gas processing (unit has not yet been installed)
- Emergency Flare (F-01)

PERMITTING HISTORY

- On July 5, 1972, Humble Oil and Refining Company submitted application for the Flomaton Oil Production and Gas Processing Facility, which consisted of the Flomaton Field and the gas treating plant. On January 1, 1973, Humble Oil and Refining Company merged into its parent corporation, Exxon Company, U.S.A.

- On February 14, 1973, Exxon Company, U.S.A. was issued operating permits for its gas treating plant, sulfur recovery plant, and emergency flare.

- On June 20, 1974 and July 30, 1974, Exxon Company, U.S.A was issued conditional operating permits to allow them to address the Alabama Air Pollution Control's reclassification of SO_2 emissions in Escambia County.

- On March 21, 1975, Exxon Company, U.S.A. requested permission to send sour crude oil directly from the newly developed Fanny Church Oil Field wells through flow lines to the Flomaton Oil Production and Gas Treating Facility. No permitting was required. On March 26, 1975, Exxon Company, U.S.A, was issued operating permits for the Flomaton/Fanny Church Oil Production and Gas Treating Facility.

- On August 10, 1976, the Fanny Church Oil Production Field was permitted for a smokeless flare. This permit was voided on May 23, 1997.

- On June 13, 1979, Exxon Company, U.S.A. submitted a construction permit application for the addition of an inlet separation and compression facility at the Flomaton Oil Production Field. On July 3, 1979, a construction permit was issued for the compressor station with a smokeless flare. On March 25, 1981, an operating permit was issued.

- Exxon Company, U.S.A. requested to be able to substitute a 243 MMBtu/hr boiler for two 97 MMBtu/hr boilers currently permitted. They also wanted to be allowed to use the two existing boilers as backups. The 243 MMBtu/hr boiler was re-located from one of the company's plants located in Louisiana. On November 28, 1984, the facility was issued a construction permit for the 243 MMBtu/hr boiler; one of the permit provisos for the boiler was revised on January 10, 1985.

- On November 15, 1996, Vintage Petroleum, Inc. acquired the Flomaton/Fanny Church Oil Production and Gas Treating Facility from Exxon Company, U.S.A.. Air permits were issued in Vintage's name on May 20, 1997.

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PERMITTING HISTORY (CON'T)

- On June 12, 1998, Air Permit No. 502-0005-Z004 was re-issued to include the custom fuel monitoring and reporting schedule for the turbines (reference letter dated October 17, 1997).

- On April 26, 2000, the initial Title V permit was issued.

- On June 22, 2000, Vintage Petroleum, Inc. submitted an initial notification to address its applicability to 40 CFR 63 Subpart HH. Facility requested to be a minor source of hazardous air pollutants (HAPs) to demonstrate compliance with this subpart. On July 15, 2002, the facility installed a BTEX Buster on the glycol dehydration system to comply with this subpart.

- On June 1, 2006, Escambia Operating Company LLC purchased the Flomaton/Fanny Church Oil Production and Gas Treating Facility.

- On July 25, 2006, 1st Title V Renewal Permit issued to Vintage Petroleum, Inc.; permit was modified on September 6, 2006 to reflect change of ownership to Escambia Operating Company, LLC.

- On August 1, 2007, Escambia Operating Company, LLC became a wholly owned subsidiary of Eagle Rock Energy Partners, LP. No name change was required.

- On March 13, 2009, Escambia Operating Company, LLC was issued Air Permit No. 502-0005-X006 for the 5.0 MMscf of gas/day Refrigeration Plant. This unit has not yet been installed at the facility. However, once installed the FFC Plant will become a oil and gas production, treating, and processing facility.

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Flomaton/Fanny Church Oil & Gas Production, Treating and Processing Facility
Facility No: 502-0005

FACILITY-WIDE EMISSIONS

Applicable regulations to the Flomaton/Fanny Church Oil Production and Natural Gas Processing and Treatment Facility (FFC Plant) are found in the following table.

Emission Point	Description	Pollutant	Emission Limit	Regulations
Sources:				
	Petroleum Production Facility that handles gas or refinery gas containing 0.10 grains of H_2S/scf	H_2S	Burn gas 20 ppbv offsite	Rule 335-3-5-.03(1) Rule 335-3-5-.03(2)
	Oil and Natural Gas Production Facilities All affected sources at an area source of HAPs: Tri-Ethylene Glycol (TEG) Dehydration Units	HAPs	Actual annual average flowrate of natural gas to glycol dehydration unit < 85,000 scm/day	§63.764(e)(1)(i)
			Or	
			Actual average emission of benzene from the glycol dehydration unit process vent to the atmosphere < 0.90 megagram per year	§63.764(e)(1)(ii) 40 CFR 63 Subpart HH (MACT Avoidance)

The following sections explain the state and federal regulations the FFC Plant may or may not be subject to.

STATE REGULATIONS

Applicability:

- ADEM Admin. Code R. 335-3-5-.03(1), "*Petroleum Production*" applies to the control of sulfur compound emissions from each petroleum production facility that handles gas or refinery gas that contains more than 0.10 grains of hydrogen sulfide (H_2S) per standard cubic foot (scf). The FFC Plant handles sour gas that contains 0.10 grain of H_2S/scf or more; therefore, the facility is subject to the applicable requirements of this regulation.

Emission Standards:

- In order to meet the applicability requirements of ADEM Admin. Code R. 335-3-5-.03(2), all process gas containing greater than the 0.10 grains of H_2S/scf shall be burned to the extent that the ground level concentrations of hydrogen sulfide are less than twenty (20) parts per billion beyond plant property limits, average over a thirty (30) minute period.

- According to ADEM Admin. Code R. 335-3-5-.03(3), SO_2 emissions in Category II counties

FACILITY-WIDE EMISSIONS

are unlimited provided that the available sulfur is less than 10 long tons per day (LTons/day). The FFC Plant is located in Escambia County which is classified as a Category II county. The available sulfur from the facility is expected to be greater than 10 Ltons/day (934 lb/hr SO_2); therefore, the SO_2 emissions will depend on the available sulfur and the hydrogen sulfide (H_2S) content in the acid gas stream as specified in this regulation. Facility records indicate that the available sulfur is around 24.54 Lton/day (2,290 lb/hr).

- Although the FFC Plant is located in Escambia County, it would not be subject to the requirements of ADEM Admin. Code R. 335-3-5-.03(4) because the facility does not have a capacity greater than fifty million standard cubic feet of sour gas per day (50 MMscf/day). The renewal application indicates that the facility process 75,000 pounds per hour of sour gas (21 MMscf/day).

- Each process gas stream that has to be vented to the atmosphere should be first captured and sent to the thermal oxidizer or emergency flare to be burned. Except for a period not to exceed 15 continuous minutes while depressurizing and/or empting equipment and when reduced pressure will not allow flow of gas to a control device, venting to the atmosphere is not allowed.

Compliance and Performance Test Methods and Procedures:

- Compliance with the requirement to burn gas containing 0.10 grains of H_2S/scf is demonstrated by routing tail gas from the sulfur recovery unit to the thermal oxidizer, routing leaks from the compressor seals to the compressor seal flare, and routing all vapors from the glycol dehydrator flash tank and regeneration vent back through the process or through a condenser and on to the thermal oxidizer. During emergency situations when the thermal oxidizer is down, the tail gas from the SRU is burned in the emergency flare. Compliance is also met by sampling and testing all sour gas streams that can be vented to atmosphere for its H_2S content (mol %) at least once each six months.

- Compliance with the requirement to maintain the ground level concentrations of hydrogen sulfide at less than twenty (20) parts per billion beyond plant property limits averaged over a thirty (30) minute period shall be met by maintaining the acid gas to assist gas ratio for the emergency flare at less that or equal to 1.5 and by maintaining the hourly average thermal oxidizer stack temperature at greater than or equal to 850 ^{O}F.

Emission Monitoring:

- Monitoring to demonstrate compliance with the requirement to burn gas with more than 0.10 grains of H_2S per scf is met by monitoring the emergency flare and thermal oxidizer as required by the existing permit. This renewal will not result any changes to monitoring.

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Recordkeeping and Reporting Requirements:

- The facility's record keeping and reporting requirements are met by performing monthly calculations for the turbines, boilers, thermal oxidizer, and flares.

Applicability:

- ADEM Admin. Code R. 335-3-14-.04 "*Prevention of Significant Deterioration (PSD) Permitting".* The FFC Plant was issued its first construction and operating permit in 1973 prior to PSD regulations being promulgated on June 19, 1978; therefore, the facility was considered a grandfathered source. In 2002, grandfathered sources were required to demonstrate compliance with PSD regulations using Best Available Retrofit Technology (BART) if they met all of the following criteria: commenced construction between August 7, 1962 and August 7, 1977, had the potential to emit 250 TPY or more of visibility-impairing air pollutants, and was listed as one of the 26 source categories under PSD that are found in 335-3-14-.04(2)(a).

  The FFC Plant commenced construction in 1973, had the potential to emit 250 TPY or more of visibility-impairing air pollutants, and was equipped with a sulfur recovery unit which is listed as one of the 26 source categories. In September 2006 (review submitted October 5, 2006), Escambia Operating Company, LLC conducted a BART review of the FFC Plant. There were three Class I areas located near the FFC Plant. The review indicated that the FFC Plant would be exempt from BART based on modeling which demonstrated that the FFC Plant would not have a significant impact on the three Class I areas.

  In order for the facility to keep its status as a grandfathered source with respect to PSD, it is required not to exceed the significant emission rates found in 335-3-14-.04(2)(w) for each project. Based on review of the facility files, the facility's status as a grandfathered source has not changed since the facility has not performed any significant modifications that would potentially trigger its applicability to PSD regulations.

Applicability:

- ADEM Admin. Code R. 335-3-16-.03, "*Major Source Operating Permits".* The FFC Plant has been deemed a major source of criteria pollutants. The sulfur dioxide (SO_2), carbon monoxide (CO), volatile organic compounds (VOC), and nitrogen oxide (NO_X) emissions from the facility have the potential to exceed the 100 tons per year threshold for criteria pollutants; therefore, the facility is subject to the applicable requirements of this regulation for criteria pollutants. The facility wide hazardous air pollutants (HAPs) emissions are expected to exceed the 10 TPY threshold for a single HAPs or the 25 TPY threshold for a combination of HAPs; however, the facility has taken limits to avoid being a major source with respect to HAPs emissions.

FACILITY-WIDE EMISSIONS

FEDERAL REGULATIONS

New Source Performance Standards (NSPS)

Applicability:

- 40 CFR 60 *Subpart A, "General Provisions"* would be subject to the FFC Plant provided that the facility is subject to one of the applicable subparts found under this subpart.

Applicability:

- 40 CFR 60 Subpart LLL, *"Standards of Performance for Onshore Natural Gas Processing: SO_2 emissions"*, would not be applicable to the FFC Plant. Although, the plant is equipped with a high pressure and a low pressure amine sweetening unit for the sour gas, the units were constructed prior to the January 20, 1984 compliance date for this regulation. Therefore, the facility is not subject to the requirements of this regulation.

Applicability:

- 40 CFR 60 Subpart KKK, *"Standards of Performance for Equipment Leaks of Volatile Organic Compounds (VOC) From Onshore Natural Gas Processing Plants"*, would not be applicable to FFC Plant until the facility has installed the refrigeration plant permitted on March 19, 2009. Therefore, the facility is not subject to the requirements of this subpart at this time.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

Applicability:

- 40 CFR 63, Subpart A, *"General Provisions"*, would be subject to the FFC Plant because the plant is subject to 40 CFR 63 Subpart HH for an area source of HAP, except as specified in Table 2 of Subpart HH.

Applicability:

- 40 CFR 63 Subpart HH, *"National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities"*, would be applicable to the FFC Plant. This subpart applies to facilities that are a major source or area source of HAPs (40 CFR §63.760(a)(1)) and either process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer (40 CFR §63.760(a)(2)) or process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user (40 CFR §63.760(a)(3)).

  A major source of HAPs under this subpart requires a potential to emit 10 TPY of one HAP or 25 TPY of a combination of HAPs (40 CFR §63.2). Initially, the FFC Plant met the

FACILITY-WIDE EMISSIONS

applicable requirements of this subpart for a major source of HAPs emissions; however, the facility installed controls to limit emissions prior to the June 17, 2002 compliance date for affected major source constructed or reconstructed before February 6, 1998 (40 CFR §63.760(f)(1)).

On January 3, 2007, the area source requirements under 40 CFR 63 Subpart HH were promulgated. Because the FFC Plant was not a major source of HAPs it became an area source of HAPs. In order to be an affected source at an area source of HAPs, the facility had to be equipped with a tri-ethylene glycol (TEG) dehydration unit (40 CFR §63.760(b)(2)). The FFC Plant was equipped with a TEG unit; therefore, it was subject to the area source requirements of this subpart. However, the facility was able to avoid having to meet the applicable control and monitoring requirements for the TEG units by complying with the exemptions specified in either §63.764(e)(1)(i) or (ii) and by maintaining the records of determination as required by 40 CFR §63.774(d)(1) (40 CFR §63.764 (e)(1)). The facility demonstrates exemption by maintaining benzene emission at less than 0.90 megagrams per year (1.0 TPY)

Emission Standards:

- To be exempt from having to meet the major source requirements under this subpart, the facility took the following measures: installed a BTEX Buster Skid to capture and route all vapors from the glycol dehydrator flash tank and regeneration vent and send them back to the process or through a condenser and on to the thermal oxidizer for burning, limited the combined throughput for both condensate storage tanks to 730,000 stock tank barrels during any 12 consecutive months, and limited the combined throughput for both crude oil storage tanks to 1,095,000 stock tank barrels during any 12 consecutive months.

- To be exempt from having to meet the general standards for area source requirements under this subpart, the facility has to meet one of the following: the actual annual average flowarate of natural gas to the glycol dehydration unit has to be less than 85 thousand standard cubic meters per day or the actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere has to be less than 0.90 megagram per year (40 CFR §63.764 (e)(1)(i) or (e)(1)(ii)).

Compliance and Performance Test Methods and Procedures:

- To demonstrate exemption from the general standards for an affected area source, the facility must meet one of the following:

    - Follow the procedures specified in 40 CFR §63.772 (b)(1) to demonstrate that the actual annual average flowarate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day the facility (40 CFR §63.764 (e)(1)(i))

    - Follow the procedures specified in 40 CFR §63.772 (b)(2) to demonstrate that the actual average emissions of benzene from the glycol dehydration unit process vent

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to the atmosphere has to be less than 0.90 megagram per year (40 CFR §63.764 (e)(1)(ii))

Emission Monitoring:

- Monitoring will be in the form of maintaining records as required by the *recordkeeping and reporting* section of this subpart of this permit.

Recordkeeping and Reporting Requirements:

- A record of the following shall be maintained and made available for inspection:
  - Each deviation
  - Monthly records of the throughput for each condensate and crude storage tank
  - Monthly record of the combined 12 month throughput of both condensate storage tanks and both crude storage tanks
  - Record of each incident of venting vapors from the glycol dehydrator into the atmosphere, except during times the dehydrator vessels are being depressurized.

- Maintain determination records to demonstrate exemption from the general standards for an affected area source as specified in 40 CFR §63.774(d)(1) (40 CFR §63.764 (e)(1)).

- Submit a periodic monitoring report (PMR) to demonstrate exemption from the major source requirements of this subpart. The report shall be submitted semi-annual on a calendar basis within thirty days of the end of the reporting period. The report shall include any deviation from the emission standards.

Emissions:

Facility wide emissions for the FFC Plant are given below. The actual emissions were obtained from 2008 Title V emission estimates while the potential emissions were obtained from the permit renewal application.

Emissions from FFC Plant (TPY)						
	$PM_{2.5}/PM_{10}$	**SO_2**	**NO_X**	**CO**	**VOC**	**Total HAPs**
ACTUAL 2008 EMISSIONS	3.22	1,070.58	108.52	79.17	85.73	0.98
POTENTIAL EMISSIONS	11.06	6,490.58	367.08	123.81	197.35	10.73

BOILER EMISSIONS

Applicable regulations for the power boiler are found in the table below. The boiler is used to generate power for utilities throughout the plant.

Emission Point	Description	Pollutant	Emission Limit	Regulations
Sources:				
(PB)	243.0 MMBtu/hr, gas fired, Power Boiler	Opacity	No more than one 6 min avg. > 20% Or No 6 min avg. > 40%	Rule 335-3-4-.01(1)(a) Rule 335-3-4-.01(1)(b)
		PM	$3.109H^{-0.589}$ Lbs/MMBtu	Rule 335-3-4-.03(2)
		SO_2	4.0 Lbs/MMBtu	Rule 335-3-5-.01(1)(b)
		SO_2	257 Tons per 12 consecutive months	Rule 335-3-14-.04 Anti-PSD Limit
		NO_X	5,840 MMBtu/day	Rule 335-3-14-.04 Anti-PSD Limit

The following sections explain the state and/or federal regulations the power boiler may or may not be subject to.

STATE REGULATIONS

Applicability:

- ADEM Admin. Code R. 335-3-4-.01, "*Visible Emissions"* for Control of Particulate Emissions is applicable to stationary sources. The power boiler would be subject to the requirements of this regulation.

Emission Standards:

- The power boiler will be required to meet the 20% and 40% opacity requirement as specified in ADEM Admin. Code R. 335-3-4-.01(1) (a) and (b).

Compliance and Performance Test Methods and Procedures:

- Provided that visible emissions are observed from the boiler, a visible emissions observation (veo) of the boiler shall be conducted using the methods specified in EPA Method 9 or Method 22. A daily visible emissions observation is not required for the boiler.

BOILER EMISSIONS

Emission Monitoring:

- No daily monitoring is required.

Recordkeeping and Reporting Requirements:

- A record of the date, time, and results of each visible emission observations, when necessary, shall be maintained. A record of corrective actions taken shall also be maintained.

Applicability:

- ADEM Admin. Code R. 335-3-4-.03(2), "*Fuel Burning Equipment"* for Control of Particulate Emissions is applicable to stationary sources. This regulation applies to fuel burning equipment located in a Class II County. Escambia County is considered a Class II County under this regulation; therefore, the power boiler would be subject to the requirements of this regulation.

Emission Standards:

- Particulate matter (PM) emissions from the power boiler shall not exceed 0.1223 Lb/MMBtu as determined by the following equation:

$$E= [3.109] * [H^{-0.589}]$$

where, E= Emissions (lb/MMBtu) and H= Heat Input (MMBtu/hr)

Compliance and Performance Test Methods and Procedures:

- No compliance testing is required for the power boiler under this regulation.

Emission Monitoring:

- Based on the permit application the potential emissions from the boiler would not be expected to exceed the allowable emission for PM; therefore, no PM monitoring would be required.

Recordkeeping and Reporting Requirements:

- No recordkeeping or reporting is required for the power boiler under this regulation.

Applicability:

- ADEM Admin. Code R. 335-3-5-.01(1)(b), "*Fuel Combustion*", limits SO_2 emissions from fuel burning equipment in Category II counties. The 243 MMBtu/hr natural gas fired boiler is subject to the requirements of this regulation.

BOILER EMISSIONS

Emission Standards:

- SO_2 emissions from fuel burning equipment in Category II counties are limited to 4.0 pounds per million BTU heat input. However, to prevent the possibility of a future exceedence of the PSD threshold, the SO_2 emissions from the power boiler are limited to 257 tons per 12 consecutive months (see applicability to PSD Permitting below).

Compliance and Performance Test Methods and Procedures:

- To demonstrate compliance with the SO_2 emission limit, the facility shall test the boiler's fuel gas for its heat and sulfur content no less than once each month.

Emission Monitoring:

- SO_2 monitoring for the boilers under this regulation shall be in the form of maintaining records of SO_2 emissions.

Recordkeeping and Reporting Requirements:

- A monthly record of the deviations, maintenance, operating hours (Hours/Month), fuel heat content (Btu/scf) and sulfur content (H_2S mol %), fuel gas consumption (Mscf/day) and (Mscf/Month), heat input (MMBtu/hr), and SO_2 emissions in Tons/Month and Tons per 12 consecutive months shall be maintained to demonstrate compliance with emission standards for the boilers.

Applicability:

- ADEM Admin. Code R. 335-3-14-.04 "*Prevention of Significant Deterioration (PSD) Permitting".* In 1984, the facility was issued a construction permit to add the 243 MMBtu/hr boiler to replace the two existing 97 MMBtu/hr boilers, the project resulted in emission that exceeded the significant emission rates found in 335-3-14-.04(2)(w) for NO_X emissions. As a result on January 10, 1985, the heat input from the power boiler was limited to maintain the NO_X emission below the PSD threshold limit of 40 TPY and to allow the facility operating flexibility with the boilers.

  In a letter dated March 15, 1988, the facility informed the Department that the H_2S level in the fuel gas used in the boiler may have averaged more than the maximum amount estimated in the 1984 application for the boiler. It was later determined that the installation of the 243 MMBtu/hr boiler did not result in an exceedance of the PSD threshold for SO_2 emissions. However, on May 17, 1988, a SO_2 emissions limit was established by the Department to prevent an exceedence in the future. The SO_2 emission limit of 257 Tons per 12 consecutive months was established based on the two year average emission prior to the boiler being permitted in November 1984, which was 217 TPY, plus 40 TPY, which is the significant emission rate for SO_2 emissions.

Emission Standards:

- Natural gas shall be burned as fuel in the power boiler.

BOILER EMISSIONS

- The released heat input from the power boiler shall not exceed 5,840 MMBtu/day.

- The sulfur dioxide emissions from the power boiler shall not exceed 257 Tons per 12 consecutive months.

Compliance and Performance Test Methods and Procedures:

- To demonstrate compliance with the NO_X emission limit to maintain the power boiler heat input at 5,840 MMBtu/day, the facility shall measure the volume of gas burned in the boiler and perform a monthly test for the heat content (Btu/scf) of the fuel gas.

- To demonstrate compliance with the SO_2 emission limit, the facility shall test the boiler's fuel gas for its sulfur content (H_2S mol%) no less than once each month.

Emission Monitoring:

- The following monitoring shall be met to demonstrate compliance with the emission standards:

    - The fuel gas volume shall be monitored with a system capable of continuously measuring and recording the flow rate and/or the parameters utilized for flow rate calculations.

    - The fuel gas volume monitor shall be located immediately upstream of the boiler.

    - The fuel gas SO_2 and Btu content shall be determined from samples that are representative of the fuel gas being consumed.

    - SO_2 emission shall be calculated while utilizing the fuel gas volume, Btu content, and H_2S content.

    - Fuel heat input shall be calculated while utilizing the fuel gas volume, Btu content, and H_2S content.

Recordkeeping and Reporting Requirements:

- A monthly record of each deviation, maintenance performed, operating hours (Hours/Month), fuel gas heat content (Btu/scf) and sulfur content (H_2S mol%), boiler's fuel gas consumption (Mscf/day) and (Mscf/Month), heat input (MMBtu/hr), and SO_2 emissions in Tons/Month and Tons per 12 consecutive months shall be maintained to demonstrate compliance with the emission standards for the boilers.

- A Periodic Monitoring Report (PMR) that identifies each incidence of a deviation from a permit term or condition for the boiler, including those that occur during startups and shutdowns shall be prepared and submitted to the Department. The PMR report shall be submitted semi-annually on a calendar basis within 30 days of the end of the reporting

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period.

Applicability:

- ADEM Admin. Code R. 335-3-16-.03, "*Major Source Operating Permits (MSOP)".* The power boiler is located at a facility that is subject to MSOP regulations; therefore, the boiler shall be subject to these regulations also.

FEDERAL REGULATIONS

New Source Performance Standards (NSPS)

Applicability:

- 40 CFR 60 Subpart D, "*Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced after August 17, 1971",* would not be applicable to the power boiler because the unit's heat input rate is not greater than 250 million British thermal units per hour (MMBtu/hr) (40 CFR §60.40(a)(1)).

Applicability:

- 40 CFR 60 Subpart D_b, "*Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units"* would not be applicable to the power boiler. Although, the power boiler was constructed after the June 19, 1984 compliance date for this regulation and the boiler has a heat input capacity greater than 100 MMBtu/hr, the unit is not subject to this regulation (40 CFR §60.40(b)). In a letter dated September 13, 1984, the Department determined that the unit would not be subject to this regulation because the unit was an existing unit (manufactured in 1967) and it was transferred from another facility. Under 40 CFR 60.14(e)(1) and (6), the relocation and routine maintenance alone of an existing facility is not considered a modification; therefore, the 243 MMBtu/hr boiler is exempt from the applicable requirements of this regulation.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

Applicability:

- 40 CFR 63 Subpart DDDDD, "*National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters*". The boiler is classified as an affected source under this subpart; however, it is not subject to any requirements under this subpart because the facility is not a major source of HAPs. Also, this regulation was vacated by EPA on June 8, 2007.

Applicability:

- 40 CFR 64, "*Compliance Assurance Monitoring (CAM)*". The power boiler is not subject to the requirements of this regulation because it does not meet all of the following criteria:

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have an emission limit or standard, use a control device to achieve compliance with the emissions limit or standard, and have pre-controlled emissions greater than 100 TPY for criteria pollutants, 10 TPY for a single hazardous air pollutant (HAP) or 25 TPY for a combination of HAPs (40 CFR §64.2(a)). The boiler has an emission limit in place for NO_X emissions and the potential NO_X emissions from the boiler are expected to exceed the 100 TPY major source threshold for criteria pollutants. However, the boiler is not equipped with a control device. Therefore, the boiler would not be subject to the requirements of this regulation.

SCCT ENGINE EMISSIONS

Applicable regulations for the simple cycle combustion turbines (SCCT) and the turbine engines are listed below. The engines are used to power the compressors which are part of the turbine package. The turbines are utilized for solar compression at the Flomaton Field.

Emission Point	Description	Pollutant	Emission Limit	Regulations
Sources:				
(304B)	1,140 BHP, SCCT, Gas Fired Turbine Engine	Opacity	No more than one 6 min avg. > 20% AND No 6 min avg. > 40%	Rule 335-3-4-.01(1)(a) Rule 335-3-4-.01(1)(b)
		NO_X	None	§60.332(e)
		SO_2 Or Sulfur	150 ppmv Or 0.8% by weight	§60.333(a) Or §60.333(b) 40 CFR 60 Subpart GG
(304C)	1,140 BHP, SCCT, Gas Fired Turbine Engine	Opacity	No more than one 6 min avg. > 20% AND No 6 min avg. > 40%	Rule 335-3-4-.01(1)(a) Rule 335-3-4-.01(1)(b)
		NO_X	None	§60.332(e)
		SO_2 Or Sulfur	150 ppmv Or 0.8% by weight	§60.333(a) Or §60.333(b) 40 CFR 60 Subpart GG

The following sections explain the state and/or federal regulations the combustion turbines and engines may or may not be subject to.

STATE REGULATIONS

Applicability:

- ADEM Admin. Code R. 335-3-4-.01, "*Visible Emissions"* for Control of Particulate Emissions is applicable to stationary sources. The stationary gas turbine engines would be subject to the requirements of this regulation.

Emission Standards:

- The turbine engines are required to meet the 20% and 40% opacity requirement as specified in ADEM Admin. Code R. 335-3-4-.01(1) (a) and (b).

SCCT ENGINE EMISSIONS

Compliance and Performance Test Methods and Procedures:

- Provided that visible emissions are observed from the engines, a visible emissions observation (veo) of the turbine engines shall be conducted using the methods specified in EPA Method 9 or Method 22. A daily visible emissions observation is not required for the turbine engines.

Emission Monitoring:

- No daily monitoring is required.

Recordkeeping and Reporting Requirements:

- A record of the date, time, and results of each visible emission observations, when necessary, shall be maintained. A record of corrective actions taken shall also be maintained.

Applicability:

ADEM Admin. Code R. 335-3-14-.04 "*Prevention of Significant Deterioration (PSD) Permitting".* As stated previously in the facility-wide emission section, the FFC Plant is a grandfathered source with respect to PSD regulations. As long as each new project does not exceed the significant emission rates found in 335-3-14-.04(2)(w), the facility's status as a grandfathered source under PSD regulations would not change. When the turbine engines were installed as part of the project for the addition of an inlet separation and compression facility at the Flomaton Oil Production Field in 1981, no significant emission rates were exceeded by the project; therefore, this project was not subject to this regulation.

Applicability:

- ADEM Admin. Code R. 335-3-16-.03, "*Major Source Operating Permits".* The FFC Plant has been deemed a major source of criteria pollutants; therefore, the engines located at this facility would be subject to the requirements of this regulation.

FEDERAL REGULATIONS

New Source Performance Standards (NSPS)

Applicability:

- 40 CFR 60 Subpart GG, "*Standards of Performance for Stationary Gas Turbines*", would be applicable to the two gas turbines because they have a heat input at peak load that is equal to or greater than 10 MMBtu/hr based on the lower heating value of the fuel fired (40 CFR §60.330 (a)) and the units were constructed, modified, or reconstructed after October 3, 1977 (40 CFR §60.330 (b)). The peak input for both turbines is 17.528 MMBtu/hr as specified in the permit application. A construction permit for these units was issued on July 3, 1979;

SCCT ENGINE EMISSIONS

therefore, the units are subject to the requirements of this regulation, except as specified in §60.332(e) and §60.332 (j) of this subpart.

Emission Standards:

- There are no nitrogen oxide (NO_X) emissions standards for the combustion turbines because the turbines have a heat input at peak load equal to or greater than 10 MMBtu/hr, but less than or equal to 100 MMBtu/hr based on the lower heating value of the fuel fired and they were constructed prior to October 3, 1982. Operating permits were issued for the turbines on March 25, 1981; therefore, these units had to be constructed prior to the October 3, 1982 compliance date and the facility is not required to meet the NO_X emission standards specified in §60.332 (a) (40 CFR 60.332(e)).

- The stationary gas turbines shall be subject to one of following emission standards for sulfur dioxide (SO_2) emissions:

    - SO_2 emissions discharged into the atmosphere from the turbines shall not exceed of 0.015 percent by volume (150 ppmv) at 15 percent oxygen and on a dry basis (40 CFR 60.333(a)), OR

    - Fuel gas shall not be burned in the turbines which contains total sulfur in excess of 0.8 percent by weight (8,000 ppmw) (40 CFR 60.333(b)).

Compliance and Performance Test Methods and Procedures:

- To demonstrate compliance with the emission standards, the facility elected to monitor the fuel gas for it sulfur content (ppmv) using the methods specified in §60.335(b)(10) or other methods approved by the Department. The facility is also required to determine the heat content (Btu/scf) of the fuel gas. Both tests are required at a frequency of no less than once every calendar quarter. The frequency of testing for the total sulfur content is based on custom monitoring schedules found in 40 CFR 60.334(i) or approved by the Department.

Emission Monitoring:

- To demonstrate that the sulfur content of the fuel gas does not exceed the emission standards, the total sulfur content of the fuel being fired in the turbines shall be monitored (40 CFR §60.334(h)(1)) or the owner or operator may elect not to monitor the total sulfur content of the gas if it meets the definition of natural gas as specified in §60.331(u) (40 CFR §60.334(h)(3)). If the facility elects not to monitor the total sulfur content of the fuel gas burned in the turbines, the facility shall demonstrate that natural gas is being burned by providing one of the sources of information specified in §60.334(h)(3)(i) or (ii)). Since the facility has elected to monitor the sulfur content, monitoring will be in the form of meeting the compliance and performance test methods and procedures section of the permit at the frequency specified in the custom schedule or approved by the Department.

SCCT ENGINE EMISSIONS

Recordkeeping and Reporting Requirements:

- A record of each deviation, engines' maintenance performed, the fuel gas Btu content (Btu/scf), the fuel gas total sulfur content (wt %), the engines' fuel gas consumption (Mscf/Month), and the engines' operating hours (Hr/Month) shall be maintained for each engine and made available for inspection.

- A Periodic Monitoring Report (PMR) that identifies each incidence of a deviation from a permit term or conditions for the turbines or engines, including those that occur during startups and shutdowns shall be prepared and submitted to the Department. The PMR report shall be submitted semi-annually on a calendar basis within 30 days of the end of the reporting period.

Applicability:

- 40 CFR 60 Subpart KKKK, "*Standards of Performance for Stationary Combustion Turbines*", would not be applicable to the two combustion turbines because these units were constructed prior to February 18, 2005 and they have not been modified or reconstructed after this date (40 CFR §60.4300). Therefore, the turbines would not be subject to the requirements of this subpart.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

Applicability:

- 40 CFR 63 Subpart YYYY, "*National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines*", would not be applicable to the two combustion turbines because these units are not located at a major source of HAPs emissions (40 CFR §63.6080).

Applicability:

- 40 CFR 64, "*Compliance Assurance Monitoring (CAM)*". The combustion turbine engines are not subject to the requirements of this regulation because they do not meet all of the following criteria: have an emission limit or standard, use a control device to achieve compliance with the emissions limit or standard, and have pre-controlled emissions greater than 100 TPY for criteria pollutants, 10 TPY for a single hazardous air pollutant (HAP) or 25 TPY for a combination of HAPs (40 CFR §64.2(a)). The engines have emission limits in place for SO_2 emissions or sulfur emissions; however, they are not equipped with a control device and their pre-controlled emissions do not exceed the major source threshold for criteria pollutants or HAPs. Therefore, the engines would not be subject to the requirements of this regulation.

STORAGE TANK EMISSIONS

The storage tanks located at the Flomaton Field and Fanny Church Field are given in the following table.

Emission Point	Description	Pollutant	Emission Limit	Regulations
Sources:				
(1302A)	168,000 Gallon Crude Oil Storage Tank- Flomaton Field			
(1302B)	168,000 Gallon Crude Oil Storage Tank- Flomaton Field			
(T-1302A)	84,000 Gallon Condensate Storage Tank- Fanny Church Field			
(T-1302B)	84,000 Gallon Condensate Storage Tank-Fanny Church Field			
(ABJ300)	84,000 Gallon Saltwater Storage Tank-Fanny Church Field			
(ABJ400)	84,000 Gallon Saltwater Storage Tank- Flomaton Field			

The following sections explain the state and/or federal regulations the storage tanks may or may not be subject to.

FEDERAL REGULATIONS

New Source Performance Standards (NSPS)

Applicability:

- 40 CFR 60 Subpart K, "*Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after June 11, 1973 and Prior to May 19, 1978",* would not be applicable to the two 168,000 gallon crude oil storage tanks located at the Flomaton Field. These units were issued operating permit on February 14, 1973, which indicates that the units were constructed on a date prior to June 11, 1973. Therefore, these units are not subject to the requirements of this subpart.

  The facility was granted permission to add the two 84,000 gallon condensate storage tanks to the Fanny Church Field on March 15, 1975. This date falls within the compliance dates applicable to this subpart. These storage tanks also store petroleum liquids which has a storage capacity greater than 40,000 gallons each; therefore, the condensate storage tanks would be subject to the requirements of this subpart (40 CFR §60.110(a)). However, this subpart does not apply to storage vessels for petroleum or condensate stored, processed, and/or treated at a drilling and production facility prior to custody transfer (40 CFR §60.110(b)). The condensate is stored at both the Flomaton and FC Fields prior to custody transfer; therefore, these tanks would also not be required to meet the applicable requirements of this subpart.

SULFUR RECOVERY UNIT/THERMAL OXIDIZER EMISSIONS

Applicable regulations for the sulfur recovery unit (SRU) and thermal oxidizer are listed below. The SRU is used to process the acid gas from the high and low pressure amine sweetening units to control SO_2 emissions. The thermal oxidizer is used to burn the tail gas emitted from the SRU.

Emission Point	Description	Pollutant	Emission Limit	Regulations
Individual Sources:				
Sulfur Recovery Unit				
	Available Sulfur for Category II Counties	SO_2	Depends on available sulfur	Rule 335-3-5-.03(3)
	Available sulfur <= 10 LTons/Day	SO_2	Unlimited	
	Or			
	Available sulfur > 10 LTons/Day & <= 50 LTons/Day	SO_2	560 Lbs SO_2/Hour	
	Or			
	Available sulfur > 50 LTons/Day & <= 100LTons/Day	SO_2	0.10 Lbs SO_2/Lb Sulfur	
	Or			
	Available sulfur > 100 LTons/Day	SO_2	0.08 Lbs SO_2/Lb Sulfur	
	Allowable SO_2 emission increase relative to the H_2S content of acid gas:	SO_2	Depends on the mole percent of H_2S in Dry Acid Gas	Rule 335-3-5-.03(3)(a)
	H_2S% in acid gas > 50% & <= 60%	SO_2	0.02 Lbs SO_2/Lb Sulfur	
	Or			
	H_2S% in acid gas > 40% & <= 50%	SO_2	0.04 Lbs SO_2/Lb Sulfur	
	Or			
	H_2S% in acid gas > 30% & <= 40%	SO_2	0.06 Lbs SO_2/Lb Sulfur	
	Or			
	H_2S% in acid gas > 20% & <= 30%	SO_2	0.10 Lbs SO_2/Lb Sulfur	
F-501 Thermal oxidizer		Opacity	No more than one 6 min avg. > 20%	Rule 335-3-4-.01(1)(a)
			AND	
			No 6 min avg. > 40%	Rule 335-3-4-.01(1)(b)
		H_2S	Burn gas with 0.10 grains of H_2S/scf	Rule 335-3-5-.03(1)
		H_2S	20 ppbv offsite	Rule 335-3-5-.03(2)

The following sections explain the state and/or federal regulations the SRU/thermal oxidizer may or may not be subject to.

STATE REGULATIONS

Applicability:

- ADEM Admin. Code R. 335-3-4-.01, "*Visible Emissions"* for Control of Particulate Emissions

SULFUR RECOVERY UNIT/THERMAL OXIDIZER EMISSIONS

is applicable to stationary sources. The thermal oxidizer would be subject to the requirements of this regulation.

Emission Standards:

- The thermal oxidizer is required to meet the 20% and 40% opacity requirement as specified in ADEM Admin. Code R. 335-3-4-.01(1) (a) and (b).

Compliance and Performance Test Methods and Procedures:

- Compliance with the visible emission standards shall be met by conducting a visible emission observation on the thermal oxidizer when visible emissions are observed.

Emission Monitoring:

- Opacity monitoring for the thermal oxidizer shall be conducted, according to the periodic opacity monitoring section for this unit, when visible emissions are observed. Opacity monitoring shall utilize either EPA Test Method 9 or Method 22 found in 40 CFR Part 60.

Recordkeeping and Reporting Requirements:

- Provided that visible emissions are observed from the thermal oxidizer, a record of the visible emissions observation specifying the date, time, and duration of the visible emissions and any corrective actions taken shall be maintained.

Applicability:

- ADEM Admin. Code R. 335-3-5-.03(1), "*Petroleum Production*" applies to the control of sulfur compound emissions from each petroleum production facility that handles gas or refinery gas that contains more than 0.10 grains of hydrogen sulfide (H_2S) per standard cubic foot (scf). The FFC Plant handles sour gas that contains 0.10 grain of H_2S/scf or more; therefore, the facility is subject to the applicable requirements of this regulation. The facility uses the thermal oxidizer and emergency flare to comply with this regulation.

Emission Standards:

- In order to meet the applicability requirements of ADEM Admin. Code R. 335-3-5-.03(1), all process gas containing greater than the 0.10 grains of H_2S/scf shall be burned to the extent that the ground level concentrations of hydrogen sulfide are less than twenty (20) parts per billion beyond plant property limits, averaged over a thirty (30) minute period (335-3-5-.03(2)). Except when being depressurized and/or emptied, venting to the atmosphere shall not exceed 15 continuous minutes.

    - SO_2 emissions from a facility designed to dispose of or process natural gas or refinery gas containing more than 0.10 grain of H_2S/scf in a Category II County depends on the available sulfur (Ltons/day) being processed (335-3-5-.03(3)). The FFC Plant is located in Escambia County which is a Category II County; therefore, the SO_2 emissions limits

SULFUR RECOVERY UNIT/THERMAL OXIDIZER EMISSIONS

for Category II Counties found in ADEM Admin. Code R. 335-3-5-.03(3) would be applicable to this facility.

- The allowable emissions of sulfur dioxide are increased as specified in ADEM Admin. Code R. 335-3-5-.03(3)(a) to allow for dry acid gas streams containing less than 60% H_2S.

- ADEM Admin. Code R. 335-3-5-.03(4) would not be applicable to the FFC Plant because it is not expected to process natural gas in Escambia County that has a capacity greater than 50 million standard cubic feet of sour gas per day (50 MMscf/day).

Compliance and Performance Test Methods and Procedures:

- Compliance with the requirement to burn gas containing 0.10 grains of H_2S/scf is demonstrated by capturing and routing the acid gas from the amine sweetening units to the SRU and the tail gas from the SRU to the thermal oxidizer. During emergency situations, acid gas from the amine sweetening units is burned in the emergency flare when the sulfur recovery plant is down or tail gas from the SRU is burned in the emergency flare when problems are encountered with the SRU. Compliance with this regulation is also met by sampling and testing each process gas stream that can be vented to atmosphere for its hydrogen sulfide content (H_2S ppmv), conducting an annual performance test on the SRU/thermal oxidizer to determine the SO_2 emission rate or SRU recovery efficiency along with total reduced sulfur (TRS) emissions, and maintaining the minimum thermal oxidizer stack temperature.

- Compliance with the requirement to maintain the ground level concentrations of hydrogen sulfide at less than twenty (20) parts per billion beyond plant property limits averaged over a thirty (30) minute period shall be met by maintaining the three hour rolling average continuous emissions monitoring system (CEMS) calculations and analysis of the sulfur recovery efficiency and/or sulfur dioxide emissions.

Emission Monitoring:

- Monitoring to demonstrate compliance with the requirement to burn gas with more than 0.10 grains of H_2S per scf shall be met for the thermal oxidizer by maintaining the thermal oxidizer stack temperature at greater than or equal to 850 ^{O}F to ensure a proper destruction efficiency. The stack temperature shall be monitored with a thermocouple or equivalent device.

Recordkeeping and Reporting Requirements:

- A record of each deviation, each performance test conducted on the SRU/thermal oxidizer, shutdown and startup records for the gas sweetening unit, the 2 stage Claus sulfur recovery unit or the thermal oxidizer, maintenance records, and three hour rolling average CEMS calculations and analysis of the sulfur recovery efficiency and/or the sulfur dioxide emissions.

SULFUR RECOVERY UNIT/THERMAL OXIDIZER EMISSIONS

- A Periodic Monitoring Report (PMR) that identifies each incidence of a deviation from a permit term or condition for the SRU or thermal oxidizer, including those that occur during startups and shutdowns shall be prepared and submitted to the Department. The PMR report shall be submitted semi-annually on a calendar basis within 30 days of the end of the reporting period.

- An Excess Emissions and CMS Performance Summary report that identifies periods when there was a failure to maintain the three hour rolling SO_2 emissions or sulfur recovery efficiency at its allowable, there was a failure to maintain the hourly thermal oxidizer stack temperature at its minimum temperature, and there was a failure for the CEMS to meet the requirements specified in 40 CFR 60 Appendix F. This report shall be submitted on a quarterly on a calendar basis within 30 days of the end of each reporting period.

Applicability:

- ADEM Admin. Code R. 335-3-16-.03, "*Major Source Operating Permits".* The SRU and thermal oxidizer are located at a facility that is subject to MSOP regulations; therefore, these units shall be subject to this regulation.

Applicability:

- 40 CFR 64, "*Compliance Assurance Monitoring (CAM)*". The SRU and thermal oxidizer are subject to the requirements of this regulation because they meet all of the following criteria: have an emission limit or standard, use a control device to achieve compliance with the emission limit or standard, and have pre-controlled emissions greater than 100 TPY for criteria pollutants, 10 TPY for a single hazardous air pollutant (HAP) or 25 TPY for a combination of HAPs (40 CFR §64.2(a)).

  The SRU is used as a control device to meet the allowable sulfur dioxide emission limits based on the available sulfur rate. The pre-controlled SO_2 emissions from the SRU are expected to exceed the 100 TPY major source threshold for criteria pollutants; therefore, this unit is subject to CAM regulations.

  The thermal oxidizer is used as control device to comply with the work practice requirement to burn process gas containing 0.10 grains of H_2S/scf. As defined in the CAM regulation, an emission limitation may be expressed in the form of a work practice, process parameter or other form of specific design. Also the pre-controlled hydrogen sulfide emissions from the thermal oxidizer are expected to exceed the 100 TPY major source threshold for criteria pollutants; therefore, this unit is subject to CAM regulations.

Emission Standards:

- Burn all process gas containing greater than 0.10 grains of H_2S/scf in the thermal oxidizer or to the emergency flare during emergencies or plant startup.

- Maintain the sulfur dioxide emissions below the allowable emissions found in ADEM Admin. Code R. 335-3-5-.03(3).

SULFUR RECOVERY UNIT/THERMAL OXIDIZER EMISSIONS

Compliance and Performance Test Methods and Procedures:

- Compliance with the requirement to burn each process gas stream containing 0.10 grains of H_2S/scf shall be demonstrated by maintaining the thermal oxidizer stack temperature at greater than or equal to 850 ^{O}F.

- Compliance with the requirement to maintain the SO_2 emission below their allowable shall be met by a CEMS which monitors the SRU. The CEMS is used to monitor, analyze, and record three hour rolling averages of the total inlet acid gas stream, inlet air stream, and tail gas leaving the SRU.

Emission Monitoring:

- CAM is met by continuously monitoring the thermal oxidizer stack temperature with a thermocouple or equivalent device, continuously monitoring the inlet feed volume to the SRU, analyzing the inlet feed monthly for its H_2S content, monitoring the inlet air volume to the SRU reaction furnace, and monitoring the SRU tail gas.

Recordkeeping and Reporting Requirements:

- A record of the instantaneous thermal oxidizer stack temperatures, thermal oxidizer calibration results, thermal oxidizer inspection results and corrective actions taken, and records of each deviation from the permit terms or conditions for the thermal oxidizer shall be maintained.

- A record of the hourly and rolling three hour averages of the volumetric flow rates for the inlet H_2S feed, the inlet air nitrogen (N_2), the inlet H_2S content, the tail gas' N_2, H_2S, and SO_2 content, the allowed SRU efficiency, the actual sulfur recovery efficiency, record of each process stream H_2S content analysis, records of SRU calibration results, records of inspection results and corrective actions taken, and records of each deviation from a permit term or condition for the SRU shall be maintained.

FLARE EMISSIONS

The FFC Plant consists of two flares. One flare is an emergency flare (FL-01), which is the main flare. This flare stack is designed to combust the entire inlet well stream, which should occur during start-ups. In an emergency, all inlet well streams should be automatically shut in and no significant quantities of gas should be flared. The solar compressor seal flare (FL-02) was installed to control emissions from the compressor seals of the two solar compressors. The applicable regulations for both flares are found in the table below.

Emission Point	Description	Pollutant	Emission Limit	Regulations
Individual Sources:				
FL-01	Emergency Flare	Opacity	No more than one 6 min avg. > 20% AND No 6 min avg. > 40%	Rule 335-3-4-.01(1)(a) Rule 335-3-4-.01(1)(b)
		H_2S	Burn gas with 0.10 grains of H_2S/scf	Rule 335-3-5-.03(1)
		H_2S	20 ppbv offsite	Rule 335-3-5-.03(2)
FL-02	Compressor Seal Flare	Opacity	No more than one 6 min avg. > 20% AND No 6 min avg. > 40%	Rule 335-3-4-.01(1)(a) Rule 335-3-4-.01(1)(b)
		H_2S	Burn gas with 0.10 grains of H_2S/scf	Rule 335-3-5-.03(1)
		H_2S	20 ppbv offsite	Rule 335-3-5-.03(2)

Individual Process Units:

- Inlet Gathering and Separation Unit
- Gas Sweetening Unit (Amine Unit)
- Glycol Dehydration Unit
- Condensate Stabilization Unit
- Sulfur Recovery unit-with Closed Vent Systems and Flare

The following sections explain the state and/or federal regulations the flares may or may not be subject to.

STATE REGULATIONS

Applicability:

- ADEM Admin. Code R. 335-3-4-.01, "*Visible Emissions"* for Control of Particulate Emissions is applicable to stationary sources. Both flares would be subject to the requirements of this regulation. Provided that either flare is used as a control device to control emissions from process equipment subject to an NSPS or NESHAP in the future that flare would no longer

FLARE EMISSIONS

be subject to this requirement. The subject flare would then be required to meet the requirements found in 40 CFR 60.18 for NSPS or 40 CFR 63.11 for NESHAP. The facility will be subject to 40 CFR 60 Subpart KKK when the refrigeration plant is installed; however, the company will not know if either flares will be used to comply with this subpart until the plant has been constructed.

Emission Standards:

- Both flares are required to meet the 20% and 40% opacity requirement as specified in ADEM Admin. Code R. 335-3-4-.01(1) (a) and (b).

Compliance and Performance Test Methods and Procedures:

- Compliance with the visible emission standards shall be met by conducting a visible emission observation on the flares each time a flaring event occurs.

Emission Monitoring:

- Opacity monitoring for the flares shall be conducted, according to the periodic opacity monitoring section for these units, each time a flaring event occurs. Opacity monitoring shall utilize either EPA Test Method 9 or Method 22 found in 40 CFR Part 60.

Recordkeeping and Reporting Requirements:

- Provided that a flaring event occurs, a record of the visible emissions observation specifying the date, time, and duration of the visible emissions and any corrective actions taken shall be maintained.

Applicability:

- ADEM Admin. Code R. 335-3-5-.03(1), "*Petroleum Production*" applies to the control of sulfur compound emissions from each petroleum production facility that handles gas or refinery gas that contains more than 0.10 grains of hydrogen sulfide (H_2S) per standard cubic foot (scf). The FFC Plant handles sour gas that contains 0.10 grain of H_2S/scf or more; therefore, the facility is subject to the applicable requirements of this regulation. The facility uses the thermal oxidizer and emergency flare to comply with this regulation.

Emission Standards:

- In order to meet the applicability requirements of ADEM Admin. Code R. 335-3-5-.03(1), all process gas containing greater than the 0.10 grains of H_2S/scf shall be burned to the extent that the ground level concentrations of hydrogen sulfide are less than twenty (20) parts per billion beyond plant property limits, averaged over a thirty (30) minute period (335-3-5-.03(2)). Except when being depressurized and/or emptied, venting to the atmosphere shall not exceed 15 continuous minutes.

    - SO_2 emissions from a facility designed to dispose of or process natural gas or refinery

FLARE EMISSIONS

gas containing more than 0.10 grain of H_2S/scf in a Category II County depends on the available sulfur (Ltons/day) being processed (335-3-5-.03(3)). The FFC Plant is located in Escambia County which is a Category II County; therefore, the SO_2 emissions limits in the table for Category II Counties found in ADEM Admin. Code R. 335-3-5-.03(3) would be applicable to this facility.

- o The allowable emissions of sulfur dioxide are increased as specified in ADEM Admin. Code R. 335-3-5-.03(3)(a) to allow for dry acid gas streams containing less than 60% H_2S.

- ADEM Admin. Code R. 335-3-5-.03(4) would not be applicable to the FFC Plant because it is not expected to process natural gas in Escambia County that has a capacity greater than 50 million standard cubic feet of sour gas per day (50 MMscf/day).

Compliance and Performance Test Methods and Procedures:

- Compliance with the requirement to burn gas containing 0.10 grains of H_2S/scf is demonstrated by capturing and routing the acid gas from the amine sweetening units to the SRU and the tail gas from the SRU to the thermal oxidizer. Acid gas from the amine sweetening units is burned in the emergency flare when the sulfur recovery plant is down. Tail gas from the SRU is burned in the emergency flare when problems are encountered with the SRU. Compliance with this regulation is also met by sampling and testing each process gas stream that can be sent to the emergency flare for its hydrogen sulfide content (H_2S ppmv) no less than once each 12 months and by sampling and testing each process gas stream that can be vented to atmosphere for its hydrogen sulfide content (H_2S ppmv) no less than once each six months.

- Compliance with the requirement to maintain the ground level concentrations of hydrogen sulfide at less than twenty (20) parts per billion beyond plant property limits averaged over a thirty (30) minute period shall be met by testing the H_2S concentration of the acid gas stream sent to the emergency flare and maintaining the assist gas to acid gas volume ratio as established.

Emission Monitoring:

- Monitoring to demonstrate compliance with the requirement to burn gas with more than 0.10 grains of H_2S per scf shall be met for the emergency flare by monitoring the inlet assist gas and acid gas feed volume and maintaining the assist gas to acid gas volume ratio at less than or equal to 1.5. These monitoring parameters were established, at the request of the Department on March 23, 2005, during the first Title V renewal to ensure that all gases are burned and that the offsite concentration is met. The monitoring parameter is based on air quality modeling of combusting 100% of an acid gas stream that would result from operating the facility at a load of 85 Ltons of per day. Provided the available sulfur rates exceed 85 Ltons/day, the Department shall require air quality modeling to be undertaken to determine if off site hydrogen sulfide concentration limits were exceeded and/or to establish a new modified indicator limit.

FLARE EMISSIONS

Recordkeeping and Reporting Requirements:

- A record of the following shall be maintained: each deviation and corrective actions taken, the results of each visible emission observation, H_2S content (mol %) of process stream sent to the emergency flare, acid gas stream volume (Mscf/day), assist gas volume (Mscf/day), stream H_2S feed rate (Lbs/day and Lb/hr), flare H_2S feed rate (Lbs/Day), emergency flare SO_2 emissions (Lbs/day), and the number of hours emergency flare operated during the month.

- A Periodic Monitoring Report (PMR) that identifies each incidence of a deviation from a permit term or condition for the emergency flare or compressor seal flare, including those that occur during startups and shutdowns shall be prepared and submitted to the Department. The PMR report shall be submitted semi-annually on a calendar basis within 30 days of the end of the reporting period.

- An Excess Emissions and CMS Performance Summary Report that identifies each period in which there was a failure to maintain the presence of a spark or flame at the flare tip each time process gas could have been sent to one of the flares. The report would be due semi-annually on a calendar basis within 30 days of the end of the reporting period.

Applicability:

- ADEM Admin. Code R. 335-3-16-.03, "*Major Source Operating Permits".* The emergency flare and the compressor seal flare are located at a facility that is subject to MSOP regulations; therefore, these units shall be subject to this regulation.

Applicability:

- 40 CFR 64, "*Compliance Assurance Monitoring (CAM)*". The emergency flare is subject to the requirements of this regulation because it meets all of the following criteria: has an emission limit or standard, uses a control device to achieve compliance with the emission limit or standard, and has pre-controlled emissions greater than 100 TPY for criteria pollutants, 10 TPY for a single hazardous air pollutant (HAP) or 25 TPY for a combination of HAPs (40 CFR §64.2(a)).

  The emergency flare is used as a control device to comply with the work practice requirement to burn process gas containing 0.10 grains of H_2S/scf. As defined in the CAM regulation, an emission limitation may be expressed in the form of a work practice, process parameter or other form of specific design. Also the pre-controlled sulfide dioxide emissions from the emergency flare are expected to exceed the 100 TPY major source threshold for criteria pollutants; therefore, this unit is subject to CAM regulations.

Emission Standards:

- Burn all process gas containing greater than 0.10 grains of H_2S/scf in the thermal oxidizer or in the emergency flare during emergencies or plant startup.

FLARE EMISSIONS

Compliance and Performance Test Methods and Procedures:

- Compliance with the requirement to burn each process gas stream containing 0.10 grains of H_2S/scf shall be demonstrated by maintaining the presence of a flame or spark at the flare tip at all times when a process gas stream may be sent to it. A visual inspection of the emergency flare for the presence of a flame or spark at the flare tip shall be conducted daily if a continuous sparking flame igniter or continuous burning pilot light is not used.

Emission Monitoring:

- CAM is met by monitoring the emergency flare as required by equipping the flare tip with a continuous sparking flame igniter, with a continuous burning pilot light, or by conducting a daily visual observation.

Recordkeeping and Reporting Requirements:

- Provided that a daily visual inspection is conducted on the flare to verify the presence of a spark or flame at the flare tip, a record of the time, date, and results of the inspection and any corrective actions shall be maintained.

- Provided that a flame igniter or pilot flame monitor is used to verify the presence of a spark or flame at the flare tip, records of the time, date and results of each calibration shall be maintained.

- A record of the time, date, and corrective actions shall be maintained for each occurrence when there was not a spark or flame present at the flare tip and process gas could be sent to the flare.

Recommendations:

After reviewing the facility files, the permit application, and the applicable state and federal regulations, Escambia Operating Company, LLC should be able to comply with and meet the requirements of its permit. I recommend that Escambia Operating Company, LLC be issued a second renewal of its MSOP No.: 502-0005 for the Flomaton/Fanny Church Oil and Gas Production and Treating Facility.

February 22, 2010
Draft Date

APPENDIX A

DRAFT PROVISOS

Alabama Department of Environmental Management

MAJOR SOURCE OPERATING PERMIT

PERMITTEE: ESCAMBIA OPERATING COMPANY, LLC

FACILITY NAME: FLOMATON/FANNY CHURCH OIL & GAS PRODUCTION & TREATING FACILITY

FACILITY NO.: 502-0005

LOCATION: FLOMATON, ESCAMBIA COUNTY, ALABAMA

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, as amended, Ala. Code 1975, §§22-28-1 to 22-28-23 (2006 Rplc. Vol. and 2007 Cum. Supp.) (the "AAPCA") and the Alabama Environmental Management Act, as amended, Ala. Code 1975, §§22-22A-1 to 22-22A-15, (2006 Rplc. Vol. and 2007 Cum. Supp.) and rules and regulations adopted thereunder, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

*Pursuant to the **Clean Air Act of 1990**, all conditions of this permit are federally enforceable by EPA, the Alabama Department of Environmental Management, and citizens in general. Those provisions which are not required under the **Clean Air Act of 1990** are considered to be state permit provisions and are not federally enforceable by EPA and citizens in general. Those provisions are contained in separate sections of this permit.*

Issuance Date: DRAFT 2/26/2010

Effective Date: APRIL 25, 2010

Expiration Date: APRIL 25, 2015

Alabama Department of Environmental Management

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General Permit Provisos

Federally Enforceable Provisos	Regulations
1. Transfer	
This permit is not transferable, whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another, except as provided in Rule 335-3-16-.13(1)(a)5.	Rule 335-3-16-.02(6)
2. Renewals	
An application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of this permit.	Rule 335-3-16-.12(2)
The source for which this permit is issued shall lose its right to operate upon the expiration of this permit unless a timely and complete renewal application has been submitted within the time constraints listed in the previous paragraph.	
3. Severability Clause	
The provisions of this permit are declared to be severable and if any section, paragraph, subparagraph, subdivision, clause, or phrase of this permit shall be adjudged to be invalid or unconstitutional by any court of competent jurisdiction, the judgment shall not affect, impair, or invalidate the remainder of this permit, but shall be confined in its operation to the section, paragraph, subparagraph, subdivision, clause, or phrase of this permit that shall be directly involved in the controversy in which such judgment shall have been rendered.	Rule 335-3-16-.05(e)
4. Compliance	
(a) The permittee shall comply with all conditions of ADEM Admin. Code 335-3. Noncompliance with this permit will constitute a violation of the Clean Air Act of 1990 and ADEM Admin. Code 335-3 and may result in an enforcement action; including but not limited to, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application by the permittee.	Rule 335-3-16-.05(f)
(b) The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.	Rule 335-3-16-.05(g)

General Permit Provisos

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5. Termination for Cause This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance will not stay any permit condition.	Rule 335-3-16-.05(h)
6. Property Rights The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.	Rule 335-3-16-.05(i)
7. Submission of Information The permittee must submit to the Department, within 30 days or for such other reasonable time as the Department may set, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon receiving a specific request, the permittee shall also furnish to the Department copies of records required to be kept by this permit.	Rule 335-3-16-.05(j)
8. Economic Incentives, Marketable Permits, and Emissions Trading No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.	Rule 335-3-16-.05(k)
9. Certification of Truth, Accuracy, and Completeness: Any application form, report, test data, monitoring data, or compliance certification submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.	Rule 335-3-16-.07(a)
10. Inspection and Entry Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized representatives of the Alabama Department of Environmental	Rule 335-3-16-.07(b)

Federally Enforceable Provisos	Regulations
Management and EPA to conduct the following: (a) Enter upon the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept pursuant to the conditions of this permit; (b) Review and/or copy, at reasonable times, any records that must be kept pursuant to the conditions of this permit; (c) Inspect, at reasonable times, this facility's equipment (including monitoring equipment and air pollution control equipment), practices, or operations regulated or required pursuant to this permit; (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements.	
11. Compliance Provisions (a) The permittee shall continue to comply with the applicable requirements with which the company has certified that it is already in compliance. (b) The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit.	Rule 335-3-16-.07(c)
12. Compliance Certification On or before June 25 of each year, a compliance certification shall be submitted. (a) The compliance certification shall include the following: (1) The identification of each term or condition of this permit that is the basis of the certification; (2) The compliance status; (3) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping	Rule 335-3-16-.07(e)

Federally Enforceable Provisos	Regulations
Requirements); (4) Whether compliance has been continuous or intermittent; (5) Such other facts as the Department may require to determine the compliance status of the source; (b) The compliance certification shall be submitted to: Alabama Department of Environmental Management Air Division P.O. Box 301463 Montgomery, AL 36130-1463 and to: Air and EPCRA Enforcement Branch EPA Region IV 61 Forsyth Street, SW Atlanta, GA 30303	
13. <u>Reopening for Cause</u> Under any of the following circumstances, this permit will be reopened prior to the expiration of the permit: (a) Additional applicable requirements under the Clean Air Act of 1990 become applicable to the permittee with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire. (b) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit. (c) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.	Rule 335-3-16-.13(5)

Federally Enforceable Provisos	Regulations
(d) The Administrator or the Department determines that this permit must be revised or revoked to assure compliance with the applicable requirements.	
14. Additional Rules and Regulations	
This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.	§22-28-16(d), Code of Alabama 1975, as amended
15. Equipment Maintenance or Breakdown	
(a) In the case of shutdown of air pollution control equipment (which operates pursuant to any permit issued by the Director) for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Director at least twenty-four (24) hours prior to the planned shutdown, unless such shutdown is accompanied by the shutdown of the source which such equipment is intended to control. Such prior notice shall include, but is not limited to the following:	Rule 335-3-1-.07(1), (2)
(1) Identification of the specific facility to be taken out of service as well as its location and permit number;	
(2) The expected length of time that the air pollution control equipment will be out of service;	
(3) The nature and quantity of emissions of air contaminants likely to occur during the shutdown period;	
(4) Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period;	
(5) The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.	
(b) In the event that there is a breakdown of equipment or upset of process in such a manner as to cause, or is expected to cause, increased emissions of air contaminants which are above an applicable standard, the person responsible for such equipment shall notify	

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the Director within 24 hours or the next working day and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Director shall be notified when the breakdown has been corrected.	
16. Operation of Capture and Control Devices	
All air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.	§22-28-16(d), Code of Alabama 1975, as amended
17. Obnoxious Odors	
This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.	Rule 335-3-1-.08
18. Fugitive Dust	
(a) Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.	Rule 335-3-4-.02
(b) Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:	
(1) By the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;	
(2) By reducing the speed of vehicular traffic to a point below that at which dust emissions are created;	
(3) By paving;	

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(4) By the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions; Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.	
19. <u>Additions and Revisions</u> Any modifications to this source shall comply with the modification procedures in Rules 335-3-16-.13 or 335-3-16-.14.	Rule 335-3-16-.13 and .14
20. <u>Recordkeeping Requirements</u> (a) Records of required monitoring information of the source shall include the following: (1) The date, place, and time of all sampling or measurements; (2) The date analyses were performed; (3) The company or entity that performed the analyses; (4) The analytical techniques or methods used; (5) The results of all analyses; and (6) The operating conditions that existed at the time of sampling or measurement. (b) Retention of records of all required monitoring data and support information of the source for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit	Rule 335-3-16-.05(c)2.

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21. Reporting Requirements	
(a) Reports to the Department of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with Rule 335-3-16-.04(9).	Rule 335-3-16-.05(c)3.
(b) Deviations from permit requirements shall be reported within 48 hours or 2 working days of such deviations, including those attributable to upset conditions as defined in the permit. The report will include the probable cause of said deviations, and any corrective actions or preventive measures that were taken.	
22. Emission Testing Requirements	
Each point of emission which requires testing will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.	Rule 335-3-1-.05(3) and Rule 335-3-1-.04(1)
The Air Division must be notified in writing at least 10 days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.	
To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:	
(1) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.	Rule 335-3-1-.04
(2) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedures require probe cleaning).	
(3) A description of the process(es) to be tested including the feed rate, any operating parameters used to control	

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or influence the operations, and the rated capacity. (4) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances. A pretest meeting may be held at the request of the source owner or the Air Division. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis. All test reports must be submitted to the Air Division within 30 days of the actual completion of the test unless an extension of time is specifically approved by the Air Division.	Rule 335-3-1-.04
23. <u>Payment of Emission Fees</u> Annual emission fees shall be remitted each year according to the fee schedule in ADEM Admin. Code R. 335-1-7-.04.	Rule 335-1-7-.04
24. <u>Other Reporting and Testing Requirements</u> Submission of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require emission testing at any time.	Rule 335-3-1-.04(1)
25. <u>Title VI Requirements (Refrigerants)</u> Any facility having appliances or refrigeration equipment, including air conditioning equipment, which use Class I or Class II ozone-depleting substances as listed in 40 CFR Part 82, Subpart A, Appendices A and B, shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82, Subpart F. No person shall knowingly vent or otherwise release any Class I or Class II substance into the environment during the repair, servicing, maintenance, or disposal of any device except as provided in 40 CFR Part 82, Subpart F. The responsible official shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the US EPA and the Department as required.	40 CFR Part 82

General Permit Provisos

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26. Chemical Accidental Prevention Provisions If a chemical listed in Table 1 of 40 CFR Part 68.130 is present in a process in quantities greater than the threshold quantity listed in Table 1, then: (a) The owner or operator shall comply with the provisions in 40 CFR Part 68. (b) The owner or operator shall submit one of the following: (1) A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR Part 68 § 68.10(a) or, (2) A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan.	40 CFR Part 68
27. Display of Permit This permit shall be kept under file or on display at all times at the site where the facility for which the permit is issued is located and will be made readily available for inspection by any or all persons who may request to see it.	Rule 335-3-14-.01(1)(d)
28. Circumvention No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes any emission of air contaminant which would otherwise violate the Division 3 rules and regulations.	Rule 335-3-1-.10
29. Visible Emissions Unless otherwise specified in the Unit Specific provisos of this permit, any source of particulate emissions shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity will be determined by 40 CFR Part 60, Appendix A, Method 9, unless otherwise specified in the Unit Specific provisos of this permit.	Rule 335-3-4-.01(1)

General Permit Provisos

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30. <u>Fuel-Burning Equipment</u>	
(a) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge particulate emissions in excess of the emissions specified in Part 335-3-4-.03.	Rule 335-3-4-.03
(b) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge sulfur dioxide emissions in excess of the emissions specified in Part 335-3-5-.01.	Rule 335-3-5-.01
31. <u>Process Industries – General</u>	
Unless otherwise specified in the Unit Specific provisos of this permit, no process may discharge particulate emissions in excess of the emissions specified in Part 335-3-4-.04.	Rule 335-3-4-.04
32. <u>Averaging Time for Emission Limits</u>	
Unless otherwise specified in the permit, the averaging time for the emission limits listed in this permit shall be the nominal time required by the specific test method.	Rule 335-3-1-.05
33. <u>Compliance Assurance Monitoring (CAM)</u>	
Conditions (a) through (d) that follow are general conditions applicable to emissions units that are subject to the CAM requirements. Specific requirements related to each emissions unit are contained in the unit specific provisos and the attached CAM appendices.	
(a) Operation of Approved Monitoring	40 CFR 64.7
(1) Commencement of operation. The owner or operator shall conduct the monitoring required under this section and detailed in the unit specific provisos and CAM appendix of this permit (if required) upon issuance of the permit, or by such later date specified in the permit pursuant to §64.6(d).	
(2) Proper maintenance. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.	
(3) Continued operation. Except for, as applicable, monitoring malfunctions, associated repairs, and	

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required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. (4) Response to excursions or exceedances. (a) Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable. (b) Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and	

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maintenance procedures and records, and inspection of the control device, associated capture system, and the process. (5) Documentation of need for improved monitoring. After approval of monitoring under this part, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the Department and, if necessary, submit a proposed modification to the permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.	
(b) Quality Improvement Plan (QIP) Requirements	40 CFR 64.8
(1) Based on the results of a determination made under Section 33(a)(4)(b) above, the Administrator or the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with 40 CFR §64.6(c)(3), the permit may specify an appropriate threshold, such as an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, for requiring the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.	
(2) Elements of a QIP:	
A. The owner or operator shall maintain a written QIP, if required, and have it available for inspection.	
B. The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures,	

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the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate: (i) Improved preventive maintenance practices. (ii) Process operation changes. (iii) Appropriate improvements to control methods. (iv) Other steps appropriate to correct control performance. (v) More frequent or improved monitoring (only in conjunction with one or more steps under paragraphs (2)(b)(i) through (iv) above). (3) If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the Department if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined. (4) Following implementation of a QIP, upon any subsequent determination pursuant to Section 33(a)(4)(b) above, the Department may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have: A. Failed to address the cause of the control device performance problems; or B. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. (5) Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.	

General Permit Provisos

Federally Enforceable Provisos	Regulations
(c) Reporting and Recordkeeping Requirements	40 CFR 64.9
(1) General reporting requirements	
A. On and after the date specified in Section 33(a)(1) above by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with ADEM Admin. Code R. 335-3-16-.05(c)3.	
B. A report for monitoring under this part shall include, at a minimum, the information required under ADEM Admin. Code R. 335-3-16-.05(c)3. and the following information, as applicable:	
(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;	
(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and	
(iii) A description of the actions taken to implement a QIP during the reporting period as specified in Section 33(b) above. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.	
(2) General recordkeeping requirements.	
A. The owner or operator shall comply with the recordkeeping requirements specified in ADEM Admin. Code R. 335-3-16-.05(c)2.. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to Section 33(b) above and any activities undertaken to implement a quality improvement plan, and other supporting information required to	

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be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). B. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	
(d) Savings Provisions (1) Nothing in this part shall: A. Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this part shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate authority under the Act, including monitoring in permits issued pursuant to title I of the Act. The purpose of this part is to require, as part of the issuance of a permit under title V of the Act, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of this part. B. Restrict or abrogate the authority of the Department to impose additional or more stringent monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable. C. Restrict or abrogate the authority of the Department to take any enforcement action under the Act for	40 CFR 64.10

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any violation of an applicable requirement or of any person to take action under section 304 of the Act.	
34. <u>Permit Shield</u>	
A permit shield exists under this operating permit in accordance with ADEM Admin. Code 335-3-16-.10 in that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance. The permit shield is based on the accuracy of the information supplied in the application for this permit. Under this shield, it has been determined that requirements listed as non-applicable in the application are not applicable to this source.	Rule 335-3-16-.10

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Summary Page for Power Boiler

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8,760** Hours/Year

Emission Limitations:

Emission Point #	Description	Pollutant	Emission Limit	Regulation
(PB)	**243.0 MMBtu/hr, gas fired, Power Boiler**	Opacity	No more than one 6 min avg. > 20%	Rule 335-3-4-.01(1)(a)
			AND	
			No 6 min avg. > 40%	Rule 335-3-4-.01(1)(b)
		PM	$3.109H^{-0.589}$ Lbs/MMBtu	Rule 335-3-4-.03(2)
		SO_2	4.0 Lbs/MMBtu	Rule 335-3-5-.01(1)(b)
		SO_2	257 Tons per 12 consecutive months	Rule 335-3-14-.04 Anti-PSD Limit
		NO_X	Heat Input < 5,840 MMBtu/day	Rule 335-3-14-.04 Anti-PSD Limit

Provisos for Power Boiler

Federally Enforceable Provisos	Regulations
Applicability	
1. The power boiler shall be subject to the requirements specified in Rule 335-3-4-.01(1), Rule 335-3-4-.03(2), and Rule 335-3-5-.01(1)(b) of the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-4-.01(1) Rule 335-3-4-.03(2) Rule 335-3-5-.01(1)(b)
2. The power boiler, which has limits in place in order to avoid a review under the Prevention of Significant Deterioration regulations, shall be subject to the requirements specified in this subpart of this permit.	Rule 335-3-14-.04
3. The power boiler shall be subject to the requirements specified in Rule 335-3-16 of the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-16-.03
Emissions Standards	
1. The power boiler shall comply with the opacity standards specified in proviso 1(a) and (b) of this section of this subpart.	
(a) Except for one 6-minute period during any 60-consecutive minute period, the boiler shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(a)
(b) At no time shall the boiler discharge into the atmosphere particulate that results in an opacity greater than 40%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(b)
2. The power boiler shall comply with the emissions standards specified in proviso 2(a) through (c) of this section of this subpart.	
(a) Particulate emissions shall not exceed $[\ 3.109\ ] \times [\ \{\text{MMBtu of heat input}\}^{-0.589}\ ]$ (Lbs/MMBtu)	Rule 335-3-4-.03(2)

Provisos for Power Boiler

Federally Enforceable Provisos	Regulations
(b) Sulfur dioxide (SO_2) emissions shall not exceed 257 tons during any twelve (12) consecutive months.	Rule 335-3-5-.01(1)(b) Rule 335-3-14-.04 Anti-PSD limit
(c) Heat input rate for the power boiler shall not exceed 5,840 MMBtu/Day.	Rule 335-3-14-.04 Anti-PSD limit
3. Compliance shall be demonstrated by burning natural gas as fuel in the power boiler and by meeting the testing, monitoring, and recordkeeping and reporting requirement sections of this subpart.	
Compliance and Performance Test Methods and Procedures	
1. The fuel gas shall be tested for its BTU and hydrogen sulfide (H_2S) content in accordance to the requirements specified in provisos 1(a) through (d) of this section of this subpart.	Rule 335-3-16-.05(c)(1)(i)
(a) BTU and hydrogen sulfide content testing shall occur at a frequency of no less than once each month.	
(b) Each sample shall be analyzed for its BTU content by utilizing the ASTM Analysis Method D1826-77 or equivalent method. [Btu Content (BTU/Scf)]	
(c) Each sample collected shall be analyzed for its H_2S content utilizing the Tutwiler procedures found in 40 CFR §60.648 or the chromatographic analysis procedures found in ASTM E-260 or the stain tube procedures found in GPA 2377-86 or those provided by the stain tube manufacture. [H_2S Content (Mole %)]	
(d) The frequency of analysis may be modified upon receiving Departmental approval.	
Emission Monitoring	Rule 335-3-16-.05(c)(1)
1. The following monitoring shall be conducted to demonstrate compliance with the emission standards:	

Provisos for Power Boiler

Federally Enforceable Provisos	Regulations
(a) Fuel gas volume shall be monitored with a system capable of measuring and recording the flow rate and/or the parameters utilized for flow rate calculations.	
(b) Fuel gas volume monitoring shall be located immediately upstream of the power boiler.	
(c) Fuel gas SO_2 and Btu content shall be determined from samples representative of the fuel gas being consumed.	
(d) Fuel gas volume shall be measured continuously.	
Recordkeeping and Reporting Requirements	Rule 335-3-16-.05(c)(2)
1. A record of the information specified in provisos 1(a) through (j) of this section of this subpart shall be maintained and made available for inspection.	
(a) The date, starting time and duration of each deviation from the requirements specified in this subpart along with the cause and corrective actions taken.	
(b) Date and type of boiler maintenance that affects air emissions	
(c) Boiler Fuel Gas Btu Content [Btu content (Btu/Scf)]	
(d) Boiler Fuel Gas Hydrogen Sulfide Content [H_2S content (Mole %)]	
(e) Daily Boiler Fuel Gas Consumption [Daily Volume (MScf/Day)]	
(f) Monthly Boiler Fuel Gas Consumption [Monthly Volume (MScf/Month)]	

Provisos for Power Boiler

Federally Enforceable Provisos	Regulations
(g) Boiler Monthly Operating Hours [Operating Hours (Hours/Month)]	
(h) Fuel Gas Heat Input Rate (MMBtu/Day)= $\frac{[\text{ Daily Volume (MScf/Day) }] \text{ X } [\text{ Btu Content (Btu/Scf) }]}{1{,}000}$ Where the fuel gas Btu content (Btu/Scf) shall equal to the most recent analysis required under the *Compliance and Performance Test Methods and Procedures* section of this subpart.	
(i) Boiler SO_2 Emissions (Tons of SO_2/Month) = [Monthly Volume (MScf/Month)] X [1,000 (Scf/MScf)] X [1 Mole/380 Scf] X[{ H_2S content (Mole %) } / {100}] X [64 Lbs of SO_2/Mole of SO_2] X [1 Ton/2,000 Lbs]	
(j) Boiler SO_2 Emissions (Tons/12 consecutive months) = [Current Month Boiler SO_2 Emissions (Tons of SO_2/Month)] + [∑ of Previous 11 Months of Boiler SO_2 Emissions (Tons of SO_2/Month)]	
2. Monitoring reports meeting the requirements specified in proviso 2(a) and (b) of this section of this subpart shall be submitted to the Department.	Rule 335-3-16-.05(c)(2) Rule 335-3-16-.05(c)(3)(i)
(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups and shutdowns.	
(1) A deviation shall mean any condition determined by observation, by data derived from any monitoring or testing or recordkeeping which is required by the permit that can be used to determine or indicate compliance, that identifies an affected source has failed to meet an applicable emission limit or standard or that a work practice was not complied with or completed.	

Federally Enforceable Provisos	Regulations

(i) A deviation triggers an immediate inspection, corrective actions, and reporting within 48 hours or two work days.

(2) If no deviation event occurred during the reporting period, a statement that indicates there were no deviations from the permit requirements shall be included in the report.

(b) A Periodic Monitoring Report meeting the requirements specified in provisos 2(b)(1) through (3) of this section of this subpart shall be submitted to the Department.

(1) A deviation shall consist of, but is not limited to, any period of time during which the following occurs:

(i) There was a failure to maintain the SO_2 emission rate at or below 257 Tons during any twelve (12) consecutive months.

(ii) There was a failure to burn fuel with a heat input rate less than or equal to 5,840 MMBtu/Day.

(iii) There was a failure to meet the requirement of the *Compliance and Performance Test Methods and Procedures* section specified in this subpart.

(iv) There was a failure to meet the requirements of the *Emission Monitoring* section specified in this subpart.

(v) There was a failure to meet the *Record Keeping and Reporting Requirements section* specified in this subpart.

(vi) There was a failure to take immediate corrective actions when a deviation occurred.

Provisos for Power Boiler

Federally Enforceable Provisos	Regulations

(2) Except as provided for in proviso 2(c) of this section, the report shall meet the requirements specified in proviso 2(b)(2)(i) of this section of this subpart.

(i) *For each deviation event, the following information shall be submitted.*

(I) *Emission source description*

(II) *Permit requirement*

(III) *Date*

(IV) *Starting time*

(V) *Duration*

(VI) *Actual quantity of pollutant or parameter*

(VII) *Cause*

(VIII) *Actions taken to return to normal operating conditions*

(IX) *Total operating hours of the affected source during the reporting period*

(X) *Total hours of deviation events during the reporting period*

(XI) *Total hours of deviation events that occurred during start ups, shut downs, and malfunctions during the reporting period*

(3) The report shall be submitted semi-annually on a calendar basis according to the following reporting schedule:

Reporting Period	Submittal Date
January 1st through June 30th	*July 31st*
July 1st through December 31st	*January 31st*

Provisos for Power Boiler

Federally Enforceable Provisos	Regulations
(c) The report content specified in proviso 2(b) of this section may be modified upon receipt of Departmental approval.	
3. Each deviation from the requirements specified in this subpart, including those that occur during startups, shutdowns, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the general proviso subpart of this permit.	Rule 335-3-16-.05(c)(2) Rule 335-3-16-.05(c)(3)(ii)

Summary Page for Simple Cycle Combustion Turbine Engines

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8760** Hours/Year

Emission Limitations:

Emission Point #	Description	Pollutant	Emission Limit	Regulation
(304B)	**1,140 Bhp, Simple Cycle Combustion Turbine (SCCT) Engine, Gas Fired**	Opacity	No more than one 6 min avg. > 20% AND No 6 min avg. > 40%	Rule 335-3-4-.01(1)(a) Rule 335-3-4-.01(1)(b)
		NO_X	None	§60.332(e) 40 CFR 60 Subpart GG
		SO_2 Sulfur	150 ppmv OR 0.8% by weight	§60.333(a) OR §60.333(b) 40 CFR 60 Subpart GG
(304C)	**1,140 Bhp, Simple Cycle Combustion Turbine (SCCT) Engine, Gas Fired**	Opacity	No more than one 6 min avg. > 20% AND No 6 min avg. > 40%	Rule 335-3-4-.01(1)(a) Rule 335-3-4-.01(1)(b)
		NO_X	None	§60.332(e) 40 CFR 60 Subpart GG
		SO_2 Sulfur	150 ppmv OR 0.8% by weight	§60.333(a) OR §60.333(b) 40 CFR 60 Subpart GG

Provisos for Simple Cycle Combustion Turbine Engines

Federally Enforceable Provisos	Regulations
Applicability	
1. Each 1,140 Bhp SCCT engine shall be subject to the requirements specified in Rule 335-3-4-.01(1) of the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-4-.01(1)
2. Each 1,140 Bhp SCCT engine shall be subject to the requirements specified in Rule 335-3-16 of the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-16-.03
3. Each 1,140 Bhp SCCT engine shall be subject to the requirements specified in 40 CFR Part 60 Subpart GG, "*Standards of Performance for Stationary Gas Turbines*" and in this subpart of this permit.	40 CFR Part 60 Subpart GG
Emissions Standards	
1. Each 1,140 Bhp SCCT engine shall comply with the opacity standards specified in proviso 1(a) and (b) of this section of this subpart.	
(a) Except for one 6-minute period during any 60-consecutive minute period, the SCCT engines shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(a)
(b) At no time shall the SCCT engines discharge into the atmosphere particulate that results in an opacity greater than 40%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(b)
2. Each 1,140 Bhp SCCT engine shall comply with one of the sulfur dioxide (SO_2) emission standards specified in either proviso 2(a) or (b) of this section of this subpart.	
(a) Shall not discharge any gases, which contain in excess of 150 ppmv of SO_2 corrected to 15% oxygen and on a dry basis.	§60.333(a) 40 CFR 60 Subpart GG

Provisos for Simple Cycle Combustion Turbine Engines

Federally Enforceable Provisos	Regulations
(b) Shall not burn any fuel which contains in excess of 0.8 percent by weight of sulfur compounds as sulfur.	§60.333(b) 40 CFR 60 Subpart GG
Compliance and Performance Test Methods and Procedures	Rule 335-3-16-.05(c)(1)(i)
1. The fuel gas shall be tested for its BTU and sulfur content in accordance to the requirements specified in proviso 1(a) through (d) of this section of this subpart.	
(a) Btu and sulfur content testing shall occur at a frequency of no less than once every calendar quarter.	§60.334(i) 40 CFR 60 Subpart GG
(b) Each sample shall be analyzed for its Btu content by utilizing the ASTM Analysis Method D1826-77 or equivalent method. [Btu Content (Btu/Scf)]	
(c) Each sample shall be analyzed for its sulfur content by utilizing ASTM Analysis Method D1072-80, ASTM Analysis Method D 3031-81, ASTM Analysis Method D 4084-82, ASTM Analysis Method D 3246-81, chromatographic analysis or equivalent method, other methods approved by the Department. [Sulfur Content (Wt %)]	§60.335(b)(10) 40 CFR 60 Subpart GG
(d) The frequency of analysis may be modified upon receiving Departmental approval.	
Emission Monitoring	Rule 335-3-16-.05(c)(1)
1. Monitoring shall be in the form of performing the required testing as specified in the *Compliance and Performance Test Methods and Procedures* section of this subpart of this permit.	§60.334(h)(1) 40 CFR 60 Subpart GG

Provisos for Simple Cycle Combustion Turbine Engines

Federally Enforceable Provisos	Regulations
Record Keeping and Reporting Requirements	Rule 335-3-16-.05(c)(2)
1. A record of the information specified in provisos 1(a) through (f) of this section of this subpart shall be maintained and made available for inspection for each SCCT engine.	
(a) The date, starting time and duration of each deviation from the requirements specified in this subpart along with the cause and corrective actions taken.	
(b) Date and type of maintenance that affects air emissions	
(c) SCCT Engine Fuel Gas Btu Content [Btu Content (Btu/Scf)]	
(d) SCCT Engine Fuel Gas Sulfur Content [Sulfur Content (Wt %)]	
(e) SCCT Engine Fuel Gas Consumption [Monthly Volume (MScf/Month)]	
(f) SCCT Engine Operating Hours [Operating Hours (Hours/Month)]	
2. Monitoring reports meeting the requirements specified in proviso 2(a) through (c) of this section of this subpart shall be submitted to the Department.	Rule 335-3-16-.05(c)(2) Rule 335-3-16-.05(c)(3)(i)
(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups and shutdowns.	

Provisos for Simple Cycle Combustion Turbine Engines

Federally Enforceable Provisos	Regulations

(1) A deviation shall mean any condition determined by observation, by data derived from any monitoring or testing or recordkeeping which is required by the permit that can be used to determine or indicate compliance, that identifies an affected source has failed to meet an applicable emission limit or standard or that a work practice was not complied with or completed.

(2) If no deviation event occurred during the reporting period, a statement that indicates there were no deviations from the permit requirements shall be included in the report.

(b) A Periodic Monitoring Report meeting the requirements specified in provisos 2(b)(1) through (3) of this section of this subpart shall be submitted to the Department.

(1) A deviation shall consist of, but is not limited to, any period of time during which the following occurs:

(i) There was a failure to maintain the sulfur dioxide content of the SCCT engine discharge gases to less than or equal to 150 ppmv or to burn fuel with a sulfur content of less than or equal to 0.8 percent by weight.

(ii) There was a failure to meet the requirements of the *Compliance and Performance Test Methods and Procedures* section specified in this subpart.

(iii) There was a failure to meet the requirements of the *Record Keeping and Reporting* section specified in this subpart.

Provisos for Simple Cycle Combustion Turbine Engines

Federally Enforceable Provisos	Regulations

(iv) There was a failure to take immediate corrective actions when a deviation occurred.

(2) Except as provided for in proviso 2(c) of this section, the report shall meet the requirements specified in proviso 2(b)(2)(i) of this section of this subpart.

(i) For each deviation event, the following information shall be submitted.

(I) *Emission source description*

(II) *Permit requirement*

(III) *Date*

(IV) *Starting time*

(V) *Duration*

(VI) *Actual quantity of pollutant or parameter*

(VII) *Cause*

(VIII) *Actions taken to return to normal operating conditions*

(IX) *Total operating hours of the affected source during the reporting period*

(X) *Total hours of deviation events during the reporting period*

(XI) *Total hours of deviation events that occurred during start ups, shut downs, and malfunctions during the reporting period*

Provisos for Simple Cycle Combustion Turbine Engines

Federally Enforceable Provisos	Regulations
(3) The report shall be submitted semi-annually on a calendar basis according to the following reporting schedule: Reporting Period — Submittal Date *January 1st through June 30th* — *July 31st* *July 1st through December 31st* — *January 31st* (c) The report content specified in proviso 2(b) of this section may be modified upon receipt of Departmental approval.	
3. Each deviation from the requirements specified in this subpart, including those that occur during startups, shutdowns, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the general proviso subpart of this permit.	Rule 335-3-16-.05(c)(2) Rule 335-3-16-.05(c)(3)(ii)

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Summary Page for Sulfur Recovery Unit and Thermal Oxidizer

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8760** Hours/Year

Emission Limitations:

Emission Point #	Description	Pollutant	Emission Limit	Regulation
	Sulfur Recovery Unit			
	Available sulfur <= 10 LTons/Day Or Available sulfur > 10 LTons/Day & <= 50 LTons/Day Or Available sulfur > 50 LTons/Day & <= 100LTons/Day Or Available sulfur > 100 LTons/Day	SO_2	No limit 560 Lbs SO_2/Hour 0.10 Lbs SO_2/Lb Sulfur 0.08 Lbs SO_2/Lb Sulfur	Rule 335-3-5-.03(3)
	Allowable adjustment increase relative to H_2S content of acid gas:			Rule 335-3-5-.03(3)(a)
	H_2S% in acid gas > 50% & <= 60% Or H_2S% in acid gas > 40% & <= 50% Or H_2S% in acid gas > 30% & <= 40% Or H_2S% in acid gas > 20% & <= 30%	SO_2	0.02 Lbs SO_2/Lb Sulfur 0.04 Lbs SO_2/Lb Sulfur 0.06 Lbs SO_2/Lb Sulfur 0.10 Lbs SO_2/Lb Sulfur	
(F-501)	**Thermal oxidizer**	Opacity	No more than one 6 min avg. > 20% And No 6 min avg. > 40%	Rule 335-3-4-.01(1)(a) Rule 335-3-4-.01(1)(b)
		H_2S	Burn gas with 0.10 grains of H_2S/scf	Rule 335-3-5-.03(1)
		H_2S	20 ppbv of H_2S offsite	Rule 335-3-5-.03(2)

Provisos for Sulfur Recovery Unit and Thermal Oxidizer

Federally Enforceable Provisos	Regulations
Applicability	
1. The thermal oxidizer shall be subject to the requirements specified in Rule 335-3-4-.01(1) and Rule 335-3-5-.03(2) of the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-4-.01(1) Rule 335-3-5-.03(2)
2. The sulfur recovery unit and thermal oxidizer shall be subject to the requirements specified in Rule 335-3-5-.03(3) of the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-5-.03(3)
3. The sulfur recovery unit and thermal oxidizer shall be subject to the requirements specified in Rule 335-3-16 of the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-16-.03
4. The sulfur recovery unit and thermal oxidizer shall be subject to the requirements specified in 40 CFR Part 64, "*Compliance Assurance Monitoring*", as indicated in proviso 33 of the *General Permit Provisos* subpart of this permit and in this subpart of this permit.	40 CFR Part 64
Emission Standards	
1. The thermal oxidizer shall meet the opacity standards specified in the following provisos:	
(a) Except for one 6-minute period during any 60-consecutive minute period, the thermal oxidizer shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(a)
(b) At no time shall the thermal oxidizer discharge into the atmosphere particulate that results in an opacity greater than 40%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(b)

Provisos for Sulfur Recovery Unit and Thermal Oxidizer

Federally Enforceable Provisos	Regulations
2. Except as provided for in proviso 2(a) of this section of this subpart, each process gas stream containing more than 0.10 of a grain of hydrogen sulfide (H_2S) per Scf shall not be emitted into the atmosphere unless it is properly burned to maintain the ground level concentrations of hydrogen sulfide to less than twenty (20) parts per billion beyond plant property limits, averaged over a thirty (30) minute period. (a) Provided vessels or equipment are being de-pressured and/or emptied and the reduced pressure will not allow flow of the process gas stream to the combustion device, the venting to the atmosphere of any gas stream shall be allowed, but the duration of the venting shall not exceed 15 continuous minutes.	Rule 335-3-5-.03(2)
3. Based on the available sulfur (Ltons/day), the sulfur dioxide emissions shall not exceed the allowable emission limit as specified in the following provisos: (a) No SO_2 emissions limit, if the available sulfur is equal to or less than 10 LTons/Day. (b) 560 Lbs/Hour { i.e. sulfur recovery efficiency ranging from => 70% to => 94% }, if the available sulfur is greater than 10 LTons/Day and equal to or less than 50 LTons/day. (c) 0.10 Lbs. of SO_2/Lb. of sulfur processed { i.e. sulfur recovery efficiency => 95% }, if the available sulfur is greater than 50 LTons/Day and equal to or less than 100 LTons/day. (d) 0.08 Lbs. of SO_2/Lb. of sulfur processed { i.e. sulfur recovery efficiency => 96% }, if the available sulfur is greater than 100 LTons/Day.	Rule 335-3-5-.03(3)
4. Based on the percentage of H_2S in the dry acid gas stream, the allowable sulfur dioxide emission limits specified in proviso 3 of this section of this subpart shall be adjusted as follows:	Rule 335-3-5-.03(3)(a)

Provisos for Sulfur Recovery Unit and Thermal Oxidizer

Federally Enforceable Provisos	Regulations
(a) Increased by 0.02 Lbs of SO_2/Lb. of sulfur processed { i.e. decrease sulfur recovery efficiency by 1% }, if the H_2S content in the acid gas stream is equal to or greater than 50% and less than 60%.	
(b) Increased by 0.04 Lbs of SO_2/Lb. of sulfur processed { i.e. decrease sulfur recovery efficiency by 2% }, if the H_2S content in the acid gas stream is equal to or greater than 40% and less than 50%.	
(c) Increased by 0.06 Lbs of SO_2/Lb. of sulfur processed { i.e. decrease sulfur recovery efficiency by 3% }, if the H_2S content in the acid gas stream is equal to or greater than 30% and less than 40%.	
(d) Increased by 0.10 Lbs of SO_2/Lb. of sulfur processed { i.e. decrease sulfur recovery efficiency by 5% }, if the H_2S content in the acid gas stream is equal to or greater than 20% and less than 30%.	
(e) Must utilize the best available control technology, with consideration to technical practicability and economic reasonableness of reducing or eliminating the emissions from the facility if the H_2S content in the acid gas stream is less than 20%.	
Compliance and Performance Test Methods and Procedures	
1. A performance test shall be conducted in accordance to the requirements specified in provisions 1(a) and (b) of this section of this subpart.	Rule 335-3-16-.05(c)(1)(i)
(a) At least once every twelve (12) months	
(b) Consist of three runs of at least 1-hour in duration each.	
(1) Each run shall test for the emissions of SO_2 and TRS.	
(i) Provided the TRS concentration during the first run is determined to be less than or equal to 1% of the sulfur dioxide concentration, testing for TRS during runs 2 and 3 may be discontinued.	

Provisos for Sulfur Recovery Unit and Thermal Oxidizer

Federally Enforceable Provisos	Regulations
(2) Each run shall be conducted in accordance to the appropriate reference methods and procedures specified in proviso 2(b)(2)(i) through (vii) of this section of this subpart. (i) 40 CFR Part 60 Appendix A, Method 1 or 1A (ii) 40 CFR Part 60 Appendix A, Method 2 or 2A or 2B or 2C or 2D or 2E (iii) 40 CFR Part 60 Appendix A, Method 3 or 3A or 3B or 3C (iv) 40 CFR Part 60 Appendix A, Method 4 (v) 40 CFR Part 60 Appendix A, Method 6 or 6A or 6B or 6C (vi) 40 CFR Part 60 Appendix A, Method 15 or 15A (vii) 40 CFR Part 60 Appendix A, Method 16 or 16A or 16B	
(3) The pollutants tested for and the methods and procedures that are utilized may be modified upon receiving Departmental approval.	
Emission Monitoring	Rule 335-3-16-.05(c)(1)
1. Compliance Assurance Monitoring (CAM) as specified in *Appendix A* of this permit shall be utilized for the sulfur recovery unit and thermal oxidizer.	§64.6(b) & (c) 40 CFR Part 64
2. Opacity Monitoring as specified in *Appendix B* of this permit shall be utilized for the thermal oxidizer.	Rule 335-3-4-.01(2)
Recordkeeping and Reporting Requirements	
1. A record of the information specified in provisos 1(a) through (h) of this section of this subpart shall be maintained and made available for inspection.	Rule 335-3-16-.05(c)(2)

Provisos for Sulfur Recovery Unit and Thermal Oxidizer

Federally Enforceable Provisos	Regulations
(a) The date, starting time and duration of each deviation from the requirements specified in this subpart along with the cause and corrective actions taken.	
(b) The date, time and results of each performance tests along with any other tests conducted on the thermal oxidizer that provides additional stack pollutant content data.	
(c) The date and time of each shut down and start up of the gas sweetening unit, the 2 stage Claus sulfur recovery unit or the thermal oxidizer.	
(d) Date and type of maintenance that affects air emissions	
(e) Results of each visual emission observation	
(f) The three hour rolling average CMS calculations and analysis of the sulfur recovery and/or the sulfur dioxide emissions.	
(g) Charts of the instantaneous thermal oxidizer stack temperature.	
(h) The information required by the recordkeeping section of Subparts A and §60.647 of 40 CFR Part 60.	40 CFR §60.7 §60.647 40 CFR Part 60
2. Monitoring reports meeting the requirements specified in proviso 2(a) through (c) of this section of this subpart shall be submitted to the Department.	Rule 335-3-16-.05(c)(2) Rule 335-3-16-.05(c)(3)(i)
(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions.	
(1) A deviation shall mean any condition determined by observation, by data derived from any monitoring or testing or recordkeeping which is required by the permit that can be used to determine or indicate compliance, that identifies an affected source has failed to meet an applicable emission limit or standard or that a work practice was not complied with or completed.	

Federally Enforceable Provisos	Regulations

(2) If no deviation event occurred during the reporting period, a statement that indicates there were no deviations from the permit requirements shall be included in the report.

(b) An Excessive Emission and CMS Performance Report and Summary Report meeting the requirements specified in provisos 2(b)(1) through (3) to this section of this subpart shall be submitted to the Department.

(1) A deviation shall consist of, but is not limited to, any period of time during which the following occurs:

(i) There was a failure to maintain the three hour rolling average sulfur dioxide emissions or sulfur recovery efficiency at a rate that is equal to or less than the permitted emission limits specified in the *Emissions Standards* section of this subpart.

(ii) There was a failure to maintain the hourly average thermal oxidizer stack temperature at a temperature that is equal to or greater than 850 °F as specified in *Appendix A* of this permit for monitoring of the sulfur recovery unit and thermal oxidizer.

(iii) There was a failure of the continuous emission monitoring system (CEMS) to meet the requirements specified in Appendix F of 40 CFR Part 60 while the sulfur recovery unit or the thermal oxidizer remained in operation.

(iv) There was a failure to take immediate corrective actions when a deviation occurred.

Federally Enforceable Provisos	Regulations

(2) The report shall cover a calendar quarter period and shall be submitted according to the following reporting schedule:

Reporting Period	Submittal Date
January 1st through March 31st	*April 30th*
April 1st through June 30th	*July 31st*
July 1st through September 30th	*October 31st*
October 1st through December 31st	*January 31st*

(3) Except as provided for in proviso 2(d) of this section, each report shall meet the requirements specified in §60.7(c) of 40 CFR Part 60, Subpart A.

(c) A Periodic Monitoring Report meeting the requirements specified in provisos 2(c)(1) through (3) of this section of this subpart shall be submitted to the Department.

(1) A deviation shall consist of, but is not limited to, any period of time during which the following occurs:

(i) There was a failure to meet the daily, quarterly and annual requirements specified in Appendix F of 40 CFR Part 60.

(ii) There was a failure to maintain the 6-minute average opacity at a value less than 20% for no more than one 6-minute period when utilizing Method 9.

(iii) There was a failure to maintain the 6-minute averaging opacity at a value less than 40% during any 6-minute period when utilizing Method 9.

(iv) There was a failure to maintain the accumulated minutes in which visible emissions were observed at a value less than 12 minutes when utilizing Method 22.

Federally Enforceable Provisos	Regulations
(v) There was a failure to meet the requirements specified in the *Compliance and Performance Test Methods and Procedures* section of this subpart.	
(vi) There was a failure to meet the requirements specified in the *Emission Monitoring* section of this subpart.	
(vii) There was a failure to meet the requirements specified in the *Recordkeeping and Reporting Requirements* section of this subpart.	
(viii) There was a failure to take immediate corrective actions when a deviation occurred.	
(2) Except as provided for in proviso 2(d) of this section, the report shall meet the requirements specified in proviso 2(c)(2)(i).	
(i) For each deviation event, the following information shall be submitted.	
(I) *Emission source description*	
(II) *Permit requirement*	
(III) *Date*	
(IV) *Starting time*	
(V) *Duration*	
(VI) *Actual quantity of pollutant or parameter*	
(VII) *Cause*	
(VIII) *Actions taken to return to normal operating conditions*	

Provisos for Sulfur Recovery Unit and Thermal Oxidizer

Federally Enforceable Provisos	Regulations

(IX) *Total operating hours of the affected source during the reporting period*

(X) *Total hours of deviation events during the reporting period*

(XI) *Total hours of deviation events that occurred during start ups, shut downs, and malfunctions during the reporting period*

(3) The report shall be submitted semi-annually on a calendar basis according to the following reporting schedule:

Reporting Period	Submittal Date
January 1st through June 30th	*July 31st*
July 1st through December 31st	*January 31st*

(d) The report content and format in proviso 2(b) and (c) of this section may be modified upon receipt of Departmental approval.

3. Each deviation from the requirements specified in this subpart, including those that occur during startups, shutdowns, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the general proviso subpart of this permit.

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Summary Page for Facility Flares

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8760** Hours/Year

Emission Limitations:

Emission Point #	Description	Pollutant	Emission Limit	Regulation
(FL-01)	**Emergency Flare**			
		H_2S	Burning of gas stream	Rule 335-3-5-.03(2)
		H_2S	< 20 ppbv of H_2S off site	Rule 335-3-5-.03(2)
		Opacity	No more than one 6 min avg. > 20%	Rule 335-3-4-.01(1)(a)
			AND	
			No 6 min avg. > 40%	Rule 335-3-4-.01(1)(b)
(FL-02)	**Compressor Seal Flare**			
		H_2S	Burning of gas stream	Rule 335-3-5-.03(2)
		H_2S	< 20 ppbv of H_2S off site	Rule 335-3-5-.03(2)
		Opacity	No more than one 6 min avg. > 20%	Rule 335-3-4-.01(1)(a))
			AND	
			No 6 min avg. > 40%	Rule 335-3-4-.01(1)(b)

Individual Process Units:

Inlet gathering & separation unit
Gas sweetening unit
Glycol dehydration unit
Condensate stabilization unit
Sulfur recovery unit
with closed vent systems and flare

Provisos for Facility Flares

Federally Enforceable Provisos	Regulations
Applicability	
1. Each facility flare shall be subject to the requirements specified in Rule 335-3-4-.01 of the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-4-.01
2. Each facility flare shall be subject to the requirements specified in Rule 335-3-5-.03(2) of the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-5-.03(2)
3. Each facility flare shall be subject to the requirements specified in Rule 335-3-16 of the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-16-.03
4. The emergency flare (FL-01) shall be subject to the requirements specified in 40 CFR Part 64, "*Compliance Assurance Monitoring*" as indicated in proviso 33 of the *General Permit Provisos* subpart and in this subpart of this permit.	40 CFR Part 64
Emission Standards	
1. Each flare shall meet the opacity standards specified in provisos 1(a) and (b) of this section of this subpart.	
(a) Except for one 6-minute period during any 60-minute period, the flare shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)
(b) At no time shall the flare discharge into the atmosphere particulate that results in an opacity greater than 40%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)

Provisos for Facility Flares

Federally Enforceable Provisos	Regulations
2. Except as is provided for in proviso 2(a) of this section of this subpart, each process gas stream containing more than 0.10 of a grain of hydrogen sulfide per Scf shall not be emitted into the atmosphere unless it is properly burned to maintain the ground level concentrations of hydrogen sulfide to less than twenty (20) parts per billion beyond plant property limits, averaged over a thirty (30) minute period.	Rule 335-3-5-.03(2)
(a) Provided vessels or equipment are being de-pressured and/or emptied and the reduced pressure will not allow flow of the process gas stream to the combustion device, the venting to the atmosphere of any gas stream shall be allowed, but the duration of the venting shall not exceed 15 continuous minutes.	
Compliance and Performance Test Methods and Procedures	Rule 335-3-16-.05(c)(1)(i)
1. Each process gas stream that can be sent to the facility flares shall be tested in accordance to the requirements specified in proviso 1(a) and (b) of this section of this subpart.	
(a) The hydrogen sulfide (H_2S) content of each process gas stream shall be determined in accordance to the requirements specified in proviso 1(a)(1) and (2) of this section of this subpart.	
(1) Testing shall consist of capturing one representative sample of the stream at a frequency of no less than once each twelve (12) months.	
(2) The sample collected shall be analyzed utilizing the Tutwiler procedures found in 40 CFR §60.648 or the chromatographic analysis procedures found in ASTM E-260 or the stain tube procedures found in GPA 2377-86 or those provided by the stain tube manufacture.	
[H_2S Content (Mole %)]	
(b) Provided multiple process streams can be sent to the flare and it is possible to capture a common stream whose contents would be representative of all the streams, that common stream may be used instead of the individual process streams.	

Provisos for Facility Flares

Federally Enforceable Provisos	Regulations
(c) The frequency of this testing may be modified upon receipt of Department approval.	
Emission Monitoring	Rule 335-3-16-.05(c)(1)
1. Periodic Monitoring for the emergency flare (FL-01) and Compliance Assurance Monitoring (CAM) for each facility flare shall be conducted as specified in *Appendix C* of this permit.	40 CFR §64.6(b) & (c)
2. Opacity monitoring for each facility flare shall be conducted as specified in *Appendix D* of this permit.	Rule 335-3-4-.01(2)
Record Keeping and Reporting Requirements	Rule 335-3-16-.05(c)(2)
1. A record of the information specified in provisos 1(a) through (l) of this section of this subpart shall be maintained and made available for inspection.	
(a) The date, starting time and duration of each deviation from the requirements specified in this subpart along with the cause and corrective actions taken.	
(b) Results of each visual emission observation	
(c) Provided a continuous sparking flame igniter or continuous pilot burning light is not used, a record of the daily visual inspections of the flare for the presence of a spark or flame at the flare tip shall be maintained	
(d) Stream H_2S Content [Stream H_2S Content (Mole %)]	
(e) Name of stream that was flared	
(f) Stream Volume sent to the Emergency Flare [Stream Volume Burned (MScf/Day)]	
(g) Assist gas volume sent to Emergency Flare Assist Gas Volume Burned (MScf/Day)	

Provisos for Facility Flares

Federally Enforceable Provisos	Regulations
(h) Stream H_2S (Lbs/Day) = [Stream Volume Burned (MScf/Day)] X [1,000 Scf/MScf)] X [1 Mole/380 SCF] X [{Stream H_2S Content (Mole %)}/{100}] X [34 Lbs. H_2S/Mole H_2S]	
(i) Flare H_2S Feed Rate (Lbs/Day) = $\sum$ of Stream H_2S (Lbs/Day)	
(j) Emergency Flare Daily Operating Hours = [Operating Hours (Hours/Day)]	
(k) H_2S Feed Rate (Lbs/Hour) = $\frac{\text{Flare } H_2S \text{ Feed Rate (Lbs/Day)}}{\text{Operating Hours (Hours/Day)}}$	
(l) Flare SO_2 (Lbs/Day) = $\frac{[\text{ Flare } H_2S \text{ Feed Rate (Lbs/Day) }] \text{ X } [\text{ 64 Lbs of } SO_2\text{/ Lb Mole }] \text{ X } [\text{ 0.98 }]}{[\text{ 34 Lbs } H_2S\text{/Lb Mole }]}$	
2. Monitoring reports meeting the requirements specified in proviso 2(a) through (c) of this section of this subpart shall be submitted to the Department.	Rule 335-3-16-.05(c)(2) Rule 335-3-16-.05(c)(3)(i)
(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions.	
(1) A deviation shall mean any condition determined by observation, by data derived from any monitoring or testing or recordkeeping which is required by the permit that can be used to determine or indicate compliance, that identifies an affected source has failed to meet an applicable emission limit or standard or that a work practice was not complied with or completed.	
(2) If no deviation event occurred during the reporting period, a statement that indicates there were no deviations from the permit requirements shall be included in the report.	

Provisos for Facility Flares

Federally Enforceable Provisos	Regulations

(b) An Excessive Emission and CMS Performance Report and Summary Report meeting the requirements specified in provisos 2(b)(1) through (3) to this section of this subpart shall be submitted to the Department.

(1) A deviation shall consist of, but is not limited to, any period of time during which the following occurs:

(i) There was a failure to maintain the presence of a flame or igniter spark at the flare tip when a process gas stream could have been sent to the facility flares.

(2) The report shall be submitted semi-annually on a calendar basis according to the following reporting schedule:

Reporting Period	Submittal Date
January 1st through June 30th	*July 31st*
July 1st through December 31st	*January 31st*

(3) Except as provided for in proviso 2(d) of this section, each report shall meet the requirements specified in §60.7(c) of 40 CFR Part 60, Subpart A.

(c) A Periodic Monitoring Report meeting the requirements specified in provisos 2(c)(1) through (3) of this section of this subpart shall be submitted to the Department.

(1) A deviation shall consist of, but is not limited to, any period of time during which the following occurs:

(i) There was a failure to keep the period in which a process gas steam was vented into the atmosphere to less than or equal to 15 consecutive minutes in duration.

Provisos for Facility Flares

Federally Enforceable Provisos	Regulations
(ii) There was a failure to keep the acid gas to assist gas volume ratio for the emergency flare (FL-01) at less than or equal to 1.5 as specified in *Appendix C* of this permit.	
(iii) There was a failure to keep offsite hydrogen sulfide concentrations average over a 30 minute period to less than 20 ppmv as determined by air quality modeling study.	
(iv) There was a failure to maintain the 6-minute average opacity at a value less than or equal to 20% for no more than one 6-minute period when utilizing Method 9.	
(v) There was a failure to maintain the 6-minute averaging opacity at a value less than or equal to 40% during any 6-minute period when utilizing Method 9.	
(vi) There was a failure to maintain the accumulated minutes in which visible emissions were observed at a value less than 12 minutes when utilizing Method 22.	
(vii) There was a failure to meet the requirements specified in the *Compliance and Performance Test Methods and Procedures* section of this subpart.	
(viii) There was a failure to meet the requirements specified in the *Emission Monitoring* section of this subpart.	
(ix) There was a failure to meet the requirements specified in the *Recordkeeping and Reporting Requirements* section of this subpart.	

Provisos for Facility Flares

Federally Enforceable Provisos	Regulations

(2) Except as provided for in proviso 2(d) of this section, the report shall meet the requirements specified in proviso 2(c)(2)(i).

(i) For each deviation event, the following information shall be submitted.

(I) *Emission source description*
(II) *Permit requirement*

(III) *Date*

(IV) *Starting time*

(V) *Duration*

(VI) *Actual quantity of pollutant or parameter*

(VII) *Cause*

(VIII) *Actions taken to return to normal operating conditions*

(IX) *Total operating hours of the affected source during the reporting period*

(X) *Total hours of deviation events during the reporting period*

(XI) *Total hours of deviation events that occurred during start ups, shut downs, and malfunctions during the reporting period*

(3) The report shall be submitted semi-annually on a calendar basis according to the following reporting schedule:

Reporting Period	Submittal Date
January 1st through June 30th	*July 31st*
July 1st through December 31st	*January 31st*

Provisos for Facility Flares

Federally Enforceable Provisos	Regulations
(d) The report content and format in proviso 2(b) and (c) of this section may be modified upon receipt of Departmental approval.	
3. Each deviation from the requirements specified in this subpart, including those that occur during startups, shutdowns, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the general proviso subpart of this permit.	Rule 335-3-16-.05(c)(2) Rule 335-3-16-.05(c)(3)(ii)

Summary Page for Facility-wide HAPs Emission from Oil and Natural Gas Production Facilities

Permitted Operating Schedule: **24** Hours/Day x **365** Days/Year = **8760** Hours/Year

Emission Limitations:

Emission Point #	Description	Pollutant	Emission Limit	Regulation
Facility Wide Sources:	Oil and Natural Gas Production Facilities			
Individual Sources:				
GD-01	**Tri-ethylene Glycol (TEG) Dehydration Unit**	HAPs	Closed vent system and control device	§63.760(a) Anti-MACT Limits for Major Source
			Actual avg. flowrate of natural gas < 85 scm/day OR	§63.764(e)(1)(i) Area Source
		Benzene	Actual avg. benzene emissions < 0.90 megagrams/year	§63.764(e)(1)(ii) Area Source
1302A	**168,000 gallon crude storage tank**	HAPs	1,095,000 Stbs./ 12 consecutive months	§63.760(a) Anti-MACT Limits for Major Source
1302B	**168,000 gallon crude storage tank**			
T1302A	**84,000 gallon condensate storage tank**	HAPs	730,000 Stbs./ 12 consecutive. months	§63.760(a) Anti-MACT Limit for Major Source
T1302B	**84,000 gallon condensate storage tank**			

Other Permittted Storage Tanks not subject to this subpart:

(ABJ300)	**84,000 Gallon Saltwater Storage Tank**
(ABJ400)	**84,000 Gallon Saltwater Storage Tank**

Provisos for HAPs Emission from Oil and Natural Gas Production Facilities

Federally Enforceable Provisos	Regulations
Applicability	
1. The Flomaton/Fanny Church Oil and Natural Gas Production and Treating Plant has limits in place to avoid being an affected source at a major source of hazardous air pollutants (HAPs) with respect to 40 CFR Part 63 Subpart HH, "*National Emissions Standards for Hazardous Air Pollutants from Oil and Natural Gas Production*". However, the facility is subject to the applicable area source requirements under this subpart. Affected area sources under this subpart shall be defined as:	§63.760(b)(2) 40 CFR 63, Subpart HH
(a) Each triethylene glycol (TEG) dehydration unit located at a facility meeting the requirements of §63.760(a).	§63.760(b)(2) 40 CFR 63, Subpart HH
Emission Standards	
1. All vapors from the glycol dehydrator flash tank and regeneration vent shall be captured and sent back to the process or through a condenser and on to the thermal oxidizer for burning.	
2. The combined throughput of both condensate storage tanks shall not exceed 730,000 stock tank barrels during any twelve (12) consecutive months.	
3. The combined throughput of both crude storage tanks shall not exceed 1,095,000 stock tank barrels during any twelve (12) consecutive months.	
4. The tri-ethylene glycol (TEG) dehydration unit shall comply with the applicable standards specified in §63.764(d), except that one of the following exemptions is applicable:	§63.764(d) §63.764(e)(1) 40 CFR 63, Subpart HH
(a) The actual annual average flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day.	§63.764(e)(1)(i) 40 CFR 63, Subpart HH
(b) The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year.	§63.764(e)(1)(ii) 40 CFR 63, Subpart HH

Provisos for HAPs Emission from Oil and Natural Gas Production Facilities

Federally Enforceable Provisos	Regulations
Compliance and Performance Test Methods and Procedures	Rule 335-3-16-.05(c)(1)(i)
1. To demonstrate exemption from the general standards for affected sources at an area source of HAPs, the procedures found in one of the following provisos shall be complied with:	
(a) §63.772(b)(1) of 40 CFR 63 Subpart HH to determine the actual flowrate of natural gas to the glycol dehydration unit.	§63.764(e)(1)(i) 40 CFR 63, Subpart HH
(b) 63.772(b)(2) of 40 CFR 63 Subpart HH to determine the actual average benzene emissions from the glycol dehydration unit.	§63.764(e)(1)(ii) 40 CFR 63, Subpart HH
Emission Monitoring	
1. There are no monitoring requirements other than to maintain the required records as specified in the R*ecordkeeping and Reporting Requirements* section of this permit.	Rule 335-3-16-.05(c)(1)(i) Rule 335-3-16-.05(c)(1)(ii))
Recordkeeping and Reporting Requirements	Rule 335-3-16-.05(c)(2)
1. A record of the information specified in the following provisos shall be maintained and made available for inspection.	
(a) The date, starting time and duration of each deviation from the requirements specified in this subpart along with the cause and corrective actions taken.	
(b) A monthly record shall be maintained of the throughput of each condensate and crude storage tank.	
(c) A monthly record shall be maintained of the combined twelve (12) month throughput of both condensate storage tanks and both crude storage tanks.	
(d) A record shall be maintained of each incidence of venting vapors from the glycol dehydrator into the atmosphere, except during times when the dehydrator vessels are being de-pressured.	

Provisos for HAPs Emission from Oil and Natural Gas Production Facilities

Federally Enforceable Provisos	Regulations
(e) A record of determination shall be maintained to demonstrate exemption from the general standards found in §63.764(d) and shall include one of the following:	§63.764(e)(1) §63.774(d)(1) 40 CFR 63, Subpart HH
(1) Actual annual average natural gas throughput	§63.774(d)(1)(i) 40 CFR 63, Subpart HH
(2) Actual average benzene emission	§63.774(d)(1)(ii) 40 CFR 63, Subpart HH
2. Monitoring reports that meet the requirements specified in proviso 2(a) through (c) of this section of this subpart shall be submitted to the Department.	Rule 335-3-16-.05(c)(2) Rule 335-3-16-.05(c)(3)(i)
(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions.	
(1) A deviation shall mean any condition determined by observation, by data derived from any monitoring or testing or recordkeeping which is required by the permit that can be used to determine or indicate compliance, that identifies an affected source has failed to meet an applicable emission limit or standard or that a work practice was not complied with or completed.	
(2) If no deviation event occurred during the reporting period, a statement that indicates there were no deviations from the permit requirements shall be included in the report.	
(b) A Periodic Monitoring Report meeting the requirements specified in provisos 2(b)(1) through (3) of this section of this subpart shall be submitted to the Department.	
(1) A deviation shall consist of, but is not limited to, any period of time during which the following occurs:	
(i) There was a failure to capture all vapors from the glycol dehydrator.	

Federally Enforceable Provisos	Regulations
(ii) There was a failure to maintain the combine throughput of the condensate storage tanks to less than or equal to 730,000 stock tank barrel during any twelve (12) consecutive months. (iii) There was a failure to maintain the combine throughput of the crude storage tanks to less than or equal to 1,095,000 stock tank barrel during any twelve (12) consecutive months. (iv) There was a failure to maintain the actual annual average flowrate of natural gas to the glycol dehydration unit to less than 85 thousand standard cubic meters per day or the actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere at less than 0.90 megagram per year. (v) There was a failure to meet the requirements of the *Compliance and Performance Test Methods and Procedures* section of this subpart. (vi) There was a failure to meet the requirements of the *Recordkeeping and Reporting Requirements* section of this subpart. (vii) There was a failure to take immediate corrective actions when a deviation occurred. (2) Except as provided for in proviso 2(d) of this section, the report shall meet the requirements specified in proviso 2(b)(2)(i). (i) For each deviation event, the following information shall be submitted. (I) *Emission source description*	

Provisos for HAPs Emission from Oil and Natural Gas Production Facilities

Federally Enforceable Provisos	Regulations
(II) *Permit requirement* (III) *Date* (IV) *Starting time* (V) *Duration* (VI) *Actual quantity of pollutant or parameter* (VII) *Cause* (VIII) *Actions taken to return to normal operating conditions* (IX) *Total operating hours of the affected source during the reporting period* (X) *Total hours of deviation events during the reporting period* (XI) *Total hours of deviation events that occurred during start ups, shut downs, and malfunctions during the reporting period*	
(c) The report shall cover a calendar semi-annual period and shall be submitted to the Department on the following reporting schedule: *Reporting Period* — *Submittal Date* *January 1st through June 30th* — *July 31st* *July 1st through December 31st* — *January 31st*	
(d) The report content and format in proviso 2(b) of this section may be modified upon receipt of Departmental approval.	
3. Each deviation from the requirements specified in this subpart, including those that occur during startups, shutdowns, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the general proviso subpart of this permit.	Rule 335-3-16-.05(c)(2) Rule 335-3-16-.05(c)(3)(ii)

Appendix A: Sulfur Recovery Unit and Thermal Oxidizer Monitoring

Sulfur Recovery Unit and Thermal Oxidizer Monitoring

Monitoring approach:	*Compliance Assurance Monitoring*	*Compliance Assurance Monitoring*
I. Indicator	**Sulfur dioxide emission rate or Sulfur recovery efficiency**	**Thermal Oxidizer stack temperature**
A. Measurement approach	The inlet feed volume to the SRU and its H_2S content shall be monitored with a system capable of continuously measuring and recording its content and volumetric flow rate and/or the parameters utilized for calculating that flow rate. The inlet air volume to the SRU reaction furnace shall be monitored with a system capable of continuously measuring and recording its volumetric flow rate and/or the parameters utilized for calculating that flow rate. SRU tailgas shall be monitored with a system capable of continuously measuring and recording its nitrogen, hydrogen sulfide and sulfur dioxide content which are utilized in conjunction with the inlet sulfur and nitrogen flow rates and a nitrogen balance to calculate sulfur dioxide emission rates or sulfur recovery efficiencies.	Stack temperature shall be monitored with thermocouple or equivalent device.
II. Indicator range	**SO_2 emissions or sulfur recover efficiency shall be maintained** **@ Unlimited Lbs of SO_2/Hr** If available sulfur is < 10 LTons/Day **@ 560 Lbs of SO_2/Hr plus adjustment** *(i.e. sulfur recovery efficiency ranging from => 70% to 94% minus adjustment)* If available sulfur is => 10 LTons/Day and <= 50 LTons/Day **@ 0.1 Lbs of SO_2/Lb of sulfur processed plus adjustment** *(i.e. sulfur recovery efficiency => 95% minus adjustment)* If available sulfur is > 50 LTons/Day and <= 100 LTons/Day **@ 0.08 Lbs of SO_2/Lb of sulfur processed plus adjustment** *(i.e. sulfur recovery efficiency => 96% minus adjustment)* If available sulfur is > 100 LTons/Day	**Stack temperature of shall be maintained at => 850 °F**

Sulfur Recovery Unit and Thermal Oxidizer- Continued

Monitoring approach:	*Compliance Assurance Monitoring*	*Compliance Assurance Monitoring*
	Sulfur dioxide emission rate or Sulfur recovery efficiency	**Thermal Oxidizer stack temperature**
	A deviation is defined as anytime the three hour rolling average SO_2 emission rate is greater than the above requirement or the rolling average sulfur recovery efficiency is less than the above requirement.	A deviation is defined as anytime the hourly average stack temperature is < 850 °F.
	A deviation triggers an immediate inspection and corrective actions that meet the requirements of 40 CFR Part 64.7(d) and reporting within 48 hours or two work days.	A deviation triggers an immediate inspection and corrective actions that meet the requirements of 40 CFR Part 64.7(d) and reporting within 48 hours The minimum stack temperature may be modified upon receipt of Departmental approval.
A QIP threshold	If the accumulated hours of deviation events occurring exceed 5% of the sulfur recovery system operating time during any quarterly reporting period, a Quality Improvement Plan (QIP) shall be developed and implemented.	If the accumulated hours of deviation events occurring exceed 5% of the sulfur recovery system operating time during any quarterly reporting period, a Quality Improvement Plan shall be developed and implemented.
III. Performance criteria		
A. Data representiveness	The sampling location of the inlet and tailgas monitors shall be immediately upstream and downstream of the sulfur recovery unit and shall consist of a single device that monitors all streams or multiple devices that monitors individual or multiple streams.	Each temperature monitor shall be located within the thermal oxidizer stack approximately half way up the 250' tall stack.
	The volume sensor shall be accurate to within ±2.0%. The content sensor shall be accurate to within ±5.0%.	The temperature sensor shall be accurate to within ±1.0%.
B. Verification of operational status	Not applicable	Not applicable
C. QA/QC practices & criteria	A program for the inlet and tailgas monitoring systems shall be developed and implemented that meets the requirements specified in the following regulations: 40 CFR Part 60, App F 40 CFR Part 60, App B, PS 2 40 CFR Part 60, App B, PS 6	Each temperature monitor shall be calibrated at a frequency in accordance with the manufacturer's specifications or other written procedures that provide adequate assurance that the device is calibrated accurately.

	If a monitor fails its calibration test, the monitor shall be taken out of service until repairs and/or replacements are made and a new calibration test is undertaken and passed.	If the monitor fails its calibration test, the monitor shall be taken out of service until repairs and/or replacements are made and a new calibration test is undertaken and passed.
D. Monitoring frequency	Inlet feed and air volumes or volume parameters and inlet content shall be measured continuously. Tailgas contents shall be measured continuously.	Temperature shall be measured continuously.
Data collection procedure	Calculate and record hourly and rolling three hour averages of the following items: Volumetric flow rates for: Inlet H_2S feed Inlet air N_2 Inlet H_2S content Tailgas N_2, H_2S & SO_2 content Allowed sulfur recovery efficiency Actual sulfur recovery efficiency Record each process stream H_2S content analysis. Record calibration results. Record inspection results and corrective actions taken.	Record of the instantaneous stack temperature. Record calibration results. Record inspection results and corrective actions taken.
Averaging period	Rolling three hours	One hour

Appendix B: Opacity Monitoring for Thermal Oxidizer

Thermal Oxidizer Opacity Monitoring

Monitoring approach:	*Periodic Monitoring*
I. **Indicator**	**Opacity**
A. Measurement approach	Provided the thermal oxidizer is being operated and facility operating personnel notices visible emissions being emitted from the thermal oxidizer, a visible emission observation of the thermal oxidizer shall be undertaken. Duration of each observation shall be: >= 15 minutes And <= 60 minutes Each observation shall be conducted in accordance to either: Test Method 9 of 40 CFR Part 60 Or Test Method 22 of 40 CFR Part 60
II. Indicator range	**2nd 6-min. opacity average > 20%** **Each 6-min. opacity average > 40%** **Or** **> 12 minutes of visible emissions during observation** A deviation is defined as anytime the observed 6-minute average opacity exceeds 20% for the 2nd time when utilizing Method 9. A deviation is defined as anytime the observed 6-minute average opacity exceeds 40% for the 1st time when utilizing Method 9. A deviation is defined as anytime the accumulated time in which visible emissions were observed exceeds 12 minutes per observation when utilizing Method 22. A deviation triggers continued visible emissions observations at a frequency suitable to defining the duration of the visible emission deviation event. One observation shall be undertaken to establish the end of the visible emission deviation event. A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days.
III. Performance criteria	
A. Monitoring frequency	Each occurrence
Data collection procedure	Record: Each occurrence Each 15 second observation reading Record: Each occurrence Time, date and results of corrective actions taken
Averaging period	Six minute

Appendix C: Monitoring for Facility Flares

Monitoring for Facility Flares

Monitoring approach:	*Periodic Monitoring* Emergency Flare (FL-01)	*Compliance Assurance Monitoring* (All Facility Flares)
I. Indicator	**Assist gas to acid gas volume ratio**	**Operate flare with a flame or spark present at all times when a process gas stream may be sent to it.**
A. Measurement approach	Inlet assist gas and acid gas feed volume shall be monitored with a system capable of measuring and recording the flow rate and/or the parameters utilized for flow rate calculation or estimated utilizing material balances, computer simulations, special testing and etc. Each process gas stream that may be sent to the emergency flare shall be tested for its H_2S content.	The flare tip shall be equipped either with a continuous sparking flame igniter that is monitored by an amp meter or an equivalent device or visual observation OR with a continuously burning pilot light that is monitored with either a thermocouple or an equivalent device or by visual observation.
II. Indicator range	**Acid gas to assist gas volume ratio shall be maintained at <= 1.5** A deviation is defined as anytime the actual ratio exceeds 1.5 Three deviations within a semi-annual period trigger an immediate running of an air quality modeling study that utilizes the maximum inlet mass and flow rates that occurred during this period. The maximum ratio may be modified upon receipt of Departmental approval.	**Presence of a flame or spark at flare tip** A deviation is defined as when there was no spark or flame present at the flare tip when a process gas stream could be vented to it. A deviation triggers an immediate inspection and corrective actions that meet the requirements of 40 CFR Part 64.7(d) and reporting within 48 hours or two work days.
A. QIP threshold	Not applicable	If the accumulated hours of deviation events occurring exceed 5% of the emergency flare operating time during any quarterly reporting period, a Quality Improvement Plan (QIP) shall be developed and implemented.
III. Performance criteria		
A. Data representiveness	Each volume monitor shall be located upstream of the flare and shall consist of a single device that monitors all streams or multiple devices that monitor individual or multiple streams.	Each flame igniter or flame monitor shall be located at the flare tip and focused on the area where gas exits the flare tip. Visual observations shall be made from the location that provides the best view of the flare tip and/or flare pilot lights or flare igniter.
B. Verification of operational status	Not applicable	Not applicable

Monitoring for Facility Flares - Continued

Monitoring approach:	*Periodic Monitoring* Emergency Flare (FL-01)	*Compliance Assurance Monitoring* (All Facility Flares)
	Assist gas to acid gas volume ratio	**Operate flare with a flame or spark present at all times when a process gas stream may be sent to it.**
C. QA/QC practices & criteria	Each volume monitor shall be maintained and calibrated in accordance with the manufacturer's specifications.	Each flame igniter or flame monitor shall be maintained and calibrated in accordance with the manufacturer's specifications, other written procedures that provide adequate assurance that the device is properly maintained and calibrated accurately or at least annually whichever is more frequent. Repairs and/or replacements shall be made immediately when non functioning or damaged parts are found. Flame igniter arc length shall not exceed 10% of arc interval and shall have an arcing frequency of no greater than once every 3 seconds.
D. Monitoring frequency	Inlet acid gas and assist volume shall be measured continuously. Each process gas stream that may be sent to the flare shall be tested for its H_2S content no less than once each twelve (12) months.	Pilot flame shall be monitored either continuously with a thermocouple or daily with visual inspections if operating staff is on site. Flame igniter - arcing frequency shall be monitored either continuous with an amp meter or daily with visual inspections if operating staff is on site.
Data collection procedure	Calculate &/or record an inlet volume that is representative of the volume entering flare. Record daily hours of operation. Calculate & record H_2S feed rate. Record time, date and results of each calibration. Record time, date and results of each inspection and corrective actions taken. Record results of each test for the H_2S content of the process gas	Record time, date and duration of each incident of when no spark or flame was present at the flare tip when a process gas stream could have been sent to it. Record time, date and results of each visual observation. Record time, date and results of each calibration. Record time, date and results of each inspection and corrective actions taken.

Monitoring for Facility Flares - Continued

Monitoring approach:	*Periodic Monitoring* Emergency Flare (FL-01)	*Compliance Assurance Monitoring* (All Facility Flares)
	Assist gas to acid gas volume ratio When three deviations occur during a semi-annual period, the facility must submit to the Department the results of air quality modeling within 60 days of the end of that semi-annual period.	**Operate flare with a flame or spark present at all times when a process gas stream may be sent to it.**
Averaging period	Monthly	Instantaneous

Appendix D: Opacity Monitoring for Facility Flares

Opacity Monitoring for Facility Flares

Monitoring approach:	*Periodic Monitoring*
I. Indicator	**Opacity**
A. Measurement approach	Provided that any gas stream other than pilot gas is being burned in the facility flares, a visible emission observation shall be undertaken within 30 minutes of a flaring event commencing. Duration of each observation shall be: >= 15 minutes AND <= 60 minutes Each observation shall be conducted in accordance to either: Test Method 9 of 40 CFR Part 60 OR Test Method 22 of 40 CFR Part 60
II. Indicator range	**2nd 6-min. opacity average > 20%** **Each 6-min. opacity average >40%** **OR** **>12 minutes of visible emissions during observation** A deviation is defined as anytime the observed 6-minute average opacity exceeds 20% for the 2nd time when utilizing Method 9. A deviation is defined as anytime the observed 6-minute average opacity exceeds 40% for the 1st time when utilizing Method 9. A deviation is defined as anytime the accumulated time in which visible emissions were observed exceeds 12 minutes per observation when utilizing Method 22. A deviation triggers continued visible emissions observations at a frequency suitable to defining the duration of the visible emission deviation event. One observation shall be undertaken to establish the end of the visible emission deviation event. A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days.
III. Performance criteria	
A. Monitoring frequency	Each flaring event
Data collection procedure	Record: Each occurrence of flaring Each 15 second observation reading Record: Each occurrence Time, date and results of corrective actions taken
Averaging period	Six minute